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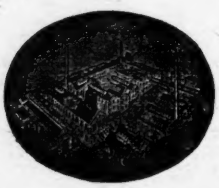

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THE MANAGEMENT OF DIABETES.[1]

By **John F. Wilkinson, M.D.,**

Honorary Physician, Melbourne Hospital; Lecturer in Clinical Physiological Chemistry, Melbourne University.

I have been asked to lecture on a subject which is of great importance to yourselves and to the community, for I am convinced that there is an increasing amount of diabetes abroad and much of it is so eminently treatable and practically curable that it is very important that you should be perfectly familiar with the modern ideas on the subject.

Joslin says that already 33% of his patients have lived longer than would have been expected of them had they been normal, healthy people.

Every case of glycosuria should be looked on with suspicion. There may be a few cases of *diabetes innocens* and a few of renal glycosuria, but the vast majority must be looked on as diabetes, mild, it may be, but urgently requiring treatment. I am convinced and always emphasize it to my patients that it pays to subject a patient with glycosuria to a rigid discipline. You cannot emphasize that point too strongly. I have seen too many cases of mild "dietetic glycosuria" end in severe glycosuria or diabetes not to be impressed with the risks attending laxity in the treatment of the condition. Quite recently there came under my notice an instance of sudden blindness, occurring in a man who knew that he had been glycosuric for the past fifteen years; the fact had not been regarded with its due seriousness and the condition culminated dramatically in retinitis and consequent blindness. I have knowledge of two other cases of a like nature, occurring within two months of the one I have mentioned, anl all three eventuated during the last three months. I repeatedly see cases of mild glycosuria with no symptoms and have known a patient in this state fracture the patella, or tibia, from such a simple accident as a fall in the garden; the loss of sugar to the bodily economy, prolonged over a period of years, and with it calcium and magnesium, has resulted in the bones being rendered brittle and prone to fracture from slight causes. Or, again, the "mild glycosuric" may develope a carbuncle and a not infrequent accompaniment of carbuncles in these patients is an aggravation of their diabetic condition, to such a degree, indeed, that coma may supervene in two or three weeks.

It is therefore of great importance to realize that glycosuria is a serious condition; "diabetes" should be the only term admissible for the description of these patients. All are diabetic, mild or severe, as all depend on pancreatic insufficiency of a greater or less degree. That the so-called "mild" cases cannot be trusted to remain mild in the absence of due regulation is the fact I have endeavoured to impress upon you.

Although diabetes is a chronic disease, it has the very hopeful feature that it is eminently treatable. In very many instances the downward course can be checked by proper management. I would ask you to remember that the treatment is by diet and not by drugs. How many patients have in the past been plied with codeine? In the light of present knowledge, codeine, although it may keep sugar elimination in check, is of no real value in the essential treatment of diabetes, nor, in fact, is any other drug. The use of codeine to keep down the sugar elimination amounts to nothing more than the treatment of a symptom, an unsound method of procedure at any time, if adopted to the exclusion of measures directed towards the cause of any condition.

In undertaking the treatment of a diabetic, your patient must understand the object of the treatment, as it is essential that you secure his co-operation.

Joslin has emphasized this point and has stated that, for any one patient who may get to know too much about his condition, there will be 99 who do not know enough. The same authority says also that, whereas intelligence and knowledge on the part of the patient are essential for successful treatment, these alone will not save the diabetic. The régime of treatment to be undergone by a diabetic patient is in itself a character test and he will require to bring to it honesty, self-control and courage.

What is diabetes? All our present knowledge and particularly the recent experimental work of Allen show that the underlying deficiency is a failure of the internal secretion of the pancreas, with consequent inability to convert sugar from the crystalline to the colloid form, in which form it must be present before it can be utilized by the body cell.

Such failure on the part of the internal secretion of the pancreas may or may not be related to gross disease; it seems reasonably certain that nervous disturbance may disturb the equilibrium normally maintained between the organs of the endocrine system and undoubtedly nervous disorder frequently upsets the balance of a diabetic.

There is reason to believe that the white races generally are overtaxing the pancreatic function; the present-day enormous consumption of carbohydrate, and particularly of sugar, is a new thing for the race. In America the consumption of sugar per head has risen from 4,990 grammes per head in 1810 to 40,700 grammes per head in 1916; perhaps a sugar famine would not be an unmixed evil.

Treatment.

From the outset, bear in mind that you will have to teach your patient the rationale of the treatment he is about to undergo. Personally, I always insist on hospital treatment for at least one month; the necessary rest is thereby secured and also, a very important point, an excellent opportunity for instructing the patient.

With occasional exceptions, ambulatory treatment, in my experience, has been unsatisfactory. The patient must learn many things; he may become his own nurse and his own chemist, but you must see

[1] Being a Lecture delivered in connexion with the Melbourne Hospital Post-Graduate Course in August, 1919.

to it that he does not become his own doctor. Even after equilibrium is established, *i.e.*, the patient is being maintained sugar-free and the weight satisfactory, various problems will arise, chiefly relating to diet. The importance of a diary, in which the patient accurately records from day to day the diet, caloric value of his food and other relevant facts, cannot be over-stated. By training your patient to keep such a diary you will save yourself much time and trouble in locating the source of any incidents that may affect his progress. Teach your patient to examine his urine, *e.g.*, the Fehling test; teach him to realize that all foodstuffs are composed of protein, fat and carbo-hydrate, plus certain salts. Have him learn the values of different foods, that is, their individual protein, fat and carbo-hydrate content. For yourselves, it is necessary that you have these data at your fingers' ends and they may be obtained conveniently set out on small cards, which form a portable and ready reference. Let your patient learn the aim and object of treatment, that he should become and remain sugar-free. He must realize that, in the great majority of cases, treatment is beneficial. All former ideas of keeping up the weight at all costs must now be abandoned and with them the practice of piling in fat. We now know that the old plan of administering abundance of fat is harmful and dangerous. You must secure a food caloric value that will maintain nutrition and keep the patient sugar-free; probably it will be below the patient's former standard, but he must learn to go slow. He must further learn that the diabetic diet is low in carbo-hydrate, as also in protein. He must learn the value of exercise and acquire and practise the principles of hygiene, particularly as they relate to the care of the skin and teeth. It is important that he avoid risk of respiratory infections, to which diabetic subjects are very prone.

The necessity for plenty of sleep, appropriate exercise and rest must be impressed upon him. Your patient must be taught how to keep sugar-free, what to do if sugar reappears and the measures to be taken in the event of his becoming sleepy and heavy with acid poison.

Further knowledge essential on the part of the patient concerns the caloric values of foods, *e.g.*, that one gramme of carbo-hydrate equals four calories, one gramme of protein equals four calories and one gramme of fat equals nine calories. Lastly, your patient must accustom himself to the use of scales and weights and must learn to restrict himself to the proper food values, in the estimation of which scales and weights are indispensable.

For yourselves, you must learn to think in terms of kilograms and calories. A dietary equivalent to 25 calories per kilogram of body weight is sufficient for a patient completely at rest and the needs of a diabetic subject taking moderate exercise are met by 30 calories per kilogram.

The latter figure is the one to be kept in view in gradually working up the diet scale.

In connexion with the diabetic dietary, I should like to draw your attention to the great use of vegetables.

These may be divided into four groups, as the following table shows, the basis of classification being the percentage of carbo-hydrate in the individual members of the groups. Vegetables are spoken of as 5%, 10% or 15%, etc., according to their carbo-hydrate content.

5%	10%	15%	20%
Lettuce	Onions	Green peas	Potatoes
Spinach	Squash	Artichokes	Shell beans
Sauerkraut	Turnips	Parsnips	Baked beans
String beans	Carrots	Canned Lima beans	Green corn
Celery	Okra		Boiled rice
Asparagus	Mushrooms		Boiled macaroni
Cucumbers			
Brussels sprouts			
Sorrel			
Radishes			
Endive			
Pumpkin			
Dandelions			
Swiss chard			
Sea kale			
Broccoli			
Cauliflower			
Tomatoes			
Kohl-rabi			
Rhubarb			
Egg plant			
Leeks			
Vegetable marrow			
Beet greens			
Water cress			
Cabbage			

FRUITS.

5%	10%	15%	20%
Ripe olives (20% fat)	Lemons	Apples	Plums
Grape fruit	Oranges	Pears	Bananas
	Cranberries	Apricots	
	Strawberries	Blueberries	
	Blackberries	Cherries	
	Gooseberries	Currants	
	Peaches	Raspberries	
	Pineapple	Huckleberries	
	Watermelon		

NUTS.

5%	10%	15%	20%	40%
Butternuts	Brazil nuts	Almonds	Peanuts	Chestnuts
Pignolias	Black walnuts	English walnuts		
	Hickory			
	Pecans	Beech nuts		
	Filberts	Pistachios		
		Pine nuts		

Reckon actually available carbo-hydrates in vegetables of 5% group as 3%, of 10% group as 6%.

You will find it of great convenience to have this and other useful tables printed on cards, with which your patient should be supplied. The 5% vegetables offer a large list to choose from; there is no necessity to limit the unfortunate patient to cauliflower and cabbage. From the list available, by appropriate and varied cookery, a fairly attractive diet can be maintained.

A point worth noting in regard to all vegetables is that their carbo-hydrate content can be considerably reduced by cooking two or three times in different waters. Thus, the 5% group may be reduced to 2% or 3%, the 10% to 6% and, in fact, by prolonged cooking, almost the whole of the carbo-hydrate may

be extracted from vegetables. I have made great use of rhubarb (5%) and have found lettuce (2%) of much utility.

A good cookery book is a valuable help to the diabetic patient, particularly such an one as that of Oppenheimer, in which every article entering into the recipes has its composition and caloric value specified.

Another table, which is not only useful, but essential, is one in which the values of any particular article of diet are set forth, as, for example:—

28 grm. contain approximately:—

	Protein. Grammes.	Fat. Grammes.	Carbo-hydrates. Grammes.	Calories.
Oatmeal (dry weight)	5	2	20	110
Meat (uncooked)	6	2	0	40
Meat (cooked)	8	3	0	60
Broth	0.7	0	0	3
Potato	1	0	6	30
Bacon (cooked)	5	15	0	155
Cream, 40%	1	12	1	120
Cream, 20%	1	6	1	60
Milk	1	1	2	20
Bread	3	0	18	90
Butter	0	25	0	240
Egg (one)	6	5	0	75
Brazil Nuts	5	20	2	210
Orange (one)	0	0	10	40
Grape fruit (one)	0	0	10	40

From such a table it is seen that bread equals 50% and potatoes equal 20% carbo-hydrate.

How suitable (?) oatmeal for the diabetic, with 20 grm. carbo-hydrate in every 28 grm. of meal! But it has been quite extensively used and it would appear that any results achieved were mainly due to a concurrent relative starvation. I would warn you of the necessity for watching closely all patent breads and biscuits; many of these preparations have a high starch content. You must know the actual proportion of starch and make due allowance for it. Here, again, a properly compiled table is of the greatest use.

I have before me the diary of a youth of 16; he keeps his own record and therein is set out the actual quantities of the various foodstuffs he is permitted. At a glance may be seen the number of calories per diem ingested. One can thus readily ascertain exactly what he has had on any given day from June 30 until to-day (August 21). I must again emphasize the necessity for method in this particular; it is indispensable if any measure of success is to be gained in a severe case.

This patient is at a critical age (16); I do not hope to maintain him sugar-free, but still may tide him over until his tolerance improves. His urine is examined every day for diacetic acid and it is regularly found that an increase of fat in the diet leads to the colouration due to diacetic acid when the urine is examined with *liquor ferri perchloridi*. I need hardly remind you of the fallacy that occurs with this test when the patient is taking aspirin or other salicylate, but it is well, perhaps, to mention it, as diabetics are prone to various neuritic pains, for which they resort to these drugs. It is useful to remember, when fat tolerance is poor, that fish is a comparatively fat-free protein.

On the whole, it is wise to work at a protein level of not more than 1.5 grammes per kilogram of body-weight. An exception is to be made in the case of growing children. In this respect, present-day ideas are at variance with the older practice, which was generous in the matter of protein.

I have now to exhibit a meal which will perhaps convey an exact idea of the procedure to be followed in prescribing a diabetic's diet. First, 100 grm. of lean, cooked steak, quite a good helping, containing approximately 250 calories. It also contains 200 grm. of celery and lettuce (uncooked) and 200 grm. of Brussels sprouts (cooked), representing 400 grm. of average 3% carbo-hydrate, or 48 calories.

With a reliable bread, made from casoid flour (such bread has been found to be starch-free), the caloric value is brought up to 350 calories. The addition of 28 grm. of butter makes a total value of approximately 575 calories; three such meals will represent nearly 1,800 calories.

As tolerance increases, 10%, or even 15% to 20%, carbo-hydrate vegetables may be introduced. Insist on the quantities being weighed, otherwise confusion will result. I have shown you this meal, as illustrative of the manner in which you must approach the question of framing a menu for these patients. Indeed, to think along similar lines is of advantage in other conditions besides diabetes. As an example, I might mention kidney cases, in which the amount of protein taken is so important. You cannot treat such cases satisfactorily unless you know the protein content of the various foods.

With reference to the standard of 30 calories per kilogram of body-weight, Joslin is quite convinced that it should not be exceeded; on the contrary, it is surprising how many people can live well on less than the 30 calories per kilogram.

In making a passing comment on milk as a diabetic diet, I may say that both sour milk and skimmed milk have been advocated.

Use both, if you like, provided you estimate and allow for the amount of carbo-hydrate.

Salt, on the whole, is not good, tending, as it does, to retention of fluid. It is considered by Joslin to lead to dropsy and favour the onset of coma.

Method of Management.

What is the procedure to be followed when a patient comes along with sugar?

(1) Test for diacetic acid, thereby ascertaining if there is any degree of acid poisoning.

(2) Insist on a month for treatment and on rest in bed, at any rate, at the outset.

(3) Get rid of the sugar. The modern method for so doing, introduced by Allen, is starvation.

One may begin the starvation at once, or prepare the patient for fasting; if diacetic acid is present, the fasting must be approached gradually, on account of the risk of precipitating coma. In the gradual introduction of starvation, omit, first, fat from the diet for two or three days; next, cut out the protein for a couple of days and then proceed to halve the carbo-hydrate every day, until ten grammes of carbo-hydrate per diem is reached; finally, starve. In many cases the sugar will have disappeared before the starvation phase is reached, but it is still advisable to include one day of starvation. I have found three,

or five, or even twelve days' fasting necessary to abolish sugar. I have failed with ten or eleven days' starvation.

A brisk purge, 426 c.cm. of Hunyadi (hot), given first thing in the morning for several days, is of advantage, although in those cases exhibiting albuminuria, castor oil is probably better.

During starvation insist on plenty of fluid, in the form of water, weak tea, black coffee; on the third day, weak broth may be given. Many patients, having lost their former great thirst, are not inclined to take the desirable amount of fluid, but every endeavour should be made to insure that they do so. Children stand starvation well, but are apt to lose weight rather rapidly.

As I have stated, the patient should be kept in bed, or otherwise at rest, during starvation.

You may meet with instances in which the urine cannot be rendered sugar-free, even by what would seem to be the limit of starvation. Under such circumstances, Joslin recommends the plan of intermittent fasting, which is carried out on the following lines. If glycosuria persists at the end of four days, give one gramme protein or 0.5 grm. carbohydrate per kilogram of body-weight for two days, then starve for three days, unless the urine should become free of sugar earlier. If the glycosuria still persists, repeat food for two days and again starve for two days. If, at the end of the second day of this fast, sugar is still present, give the one gramme of protein per kilogram for four days, followed by a one-day fast; then feed for five days and fast for one, after which feed for six days and fast for one day. This scheme has never been known to fail, according to Joslin, but it is to be remembered that the whole procedure amounts practically to starvation. Personally, I have met with one case in which the method of intermittent fasting failed to abolish glycosuria; in such an extreme case, it is doubtful if it is worth while to persist; it would appear that the most one can do is to keep the glycosuria within such bounds as are possible until the inevitable happens. However, even those cases which are apparently most unpromising, will sometimes do well by perseverance in fasting and intermittent fasting.

Feeding.

When the urine has remained sugar-free for 24 hours, the question of feeding is to be approached. Proceed by first working out the carbo-hydrate tolerance and initiate feeding with 5% vegetables, in the course of a few days working to 500 grm. of 5% vegetables (= 15 to 16 grm. carbo-hydrate). Should this be attained, it is a good beginning; many diabetics will not go much above 20 or 30 grm. carbo-hydrate; few will tolerate 100 grammes per diem. Having introduced carbo-hydrate successfully, maintained at the above level (15 to 20 grm.) with no sugar coming through, you may commence to work up the protein tolerance. Lean meat is the best article of diet for this purpose, eggs having the disadvantage of the associated fat. Aim for one gramme of protein per kilogram of body weight as a beginning and, if successful, your patient would be getting 500 to 600 grm. 5% vegetable, + 60 to 70 grm. of protein. If he is still sugar-free after a few days, you may gradually introduce fats, relative to which there cannot be said to be any definite standard for guidance as set down for carbo-hydrate and protein. But you should try to add fats until the patient ceases to lose weight or until he is receiving the appropriate number of calories per diem.

I might mention that Joslin adds no fat until the protein reaches one gramme per kilogram of body-weight.

Should sugar reappear, as, for instance, during the working up of protein, fast immediately and when sugar-free again repeat the gradual introduction of protein. You will often find that the tolerance is better at the second attempt. Always add the fats last, in order to establish carbo-hydrate tolerance firmly, even though the fats are withheld at the expense of the body-weight. Fats are highest in caloric value, but a thin patient does not need so many calories as the better nourished. The rule above stated in regard to the withholding of fats should be inflexibly followed when dealing with children (Joslin). It may be accepted as a maxim that one day of fasting is better than several of low diet.

Having obtained a balance in the manner indicated in the foregoing, you should attempt to improve the carbo-hydrate tolerance. This is best accomplished by the introduction of some 10% vegetables, as 400 grm. 5% and 100 grm. 10% vegetable, in lieu of 500 grm. of 5%. After a few days more 10% vegetable may be substituted for 5%, but it is not a good procedure to drop the 5% and jump to 10% vegetable. By working in this manner you may even reach 15% and 20% vegetables, among which potato and rice are very valuable. Next, endeavour to get the protein to 1.5 grm. per kilogram, but do not go beyond this level, except in the cases of children, whose body-building necessities demand more protein; approach their protein limit as nearly as you can.

With carbo-hydrate and protein thus increased, a good caloric value is secured, without excess of fat. A really good carbo-hydrate tolerance admits of some bread in the diet, but it should be allowed on two or three days of the week only, with perhaps oatmeal on a breadless day. It is a safe rule to observe an occasional fast day and also to keep two or three days per week in which none of the high-grade carbohydrates is given. A fairly prevalent fallacy is that toast is a suitable food for diabetics. Toast is bread minus water, partly dextrinized and containing, as it does, more starch per weight than bread, is no food for a diabetic.

Along these lines, aided by varied cookery and pursued intelligently, success will be found.

What steps are to be taken in the presence of diacetic acid and threatened acidosis?

Eliminate the fats first, then protein, then carbohydrate and then starve. Diacetic acid may still be present, but there is no cause for worry, so long as the urine is free from sugar. The patient is now within his tolerance limit and the diacetic acid will disappear.

In the event of drowsiness and impending coma, the former practice has been to pile in alkalies. Joslin maintains that many patients have been helped out of the world by alkalies used in this manner. I cannot say that I have seen them do much good. I am aware that others hold different views, but surely the rapid administration of large quantities of alkaline solution throws a great burden on an already over-taxed kidney, upon which the work of excreting the salts will fall. Joslin is most emphatic in stating that alkalies in diabetic coma are not only useless, but positively dangerous.

Joslin summarizes the measures to be taken in dealing with impending coma, as follows: (1) Bed. (2) Special nurse. (3) Keep at rest to avoid loss of calories. (4) Attend to bowels with enemata; purgatives are apt to set up an intractable diarrhœa in these cases. (5) The cardinal principle is to insist on the patient getting. by some means, large quantities of fluid. One litre every six hours must be got in, either by mouth, subcutaneously or by rectal injection. Water, weak tea, weak coffee, or weak broth may be utilized for providing the necessary fluid. (6) Diet.—If the patient is accumstomed to fasting, begin or continue the fast. Should he be on a full diet, omit the fat first, retaining the protein and carbo-hydrate for a day or two, giving at least one gramme of carbo-hydrate during the twenty-four hours (strained orange juice or water gruel is a very excellent form) per kilogram of body-weight.

Avoid alkalies at all costs; if given previously, cut down by 30 grm. per day until eliminated.

One does not see many of these patients nowadays, but I have seen one recently where threatened coma was warded off by these methods.

I am afraid I have talked too long and there are many things still to be said, but I have tried to give you a general idea of the lines on which we are thinking in these days, while handling this very serious class of case. I am confident that if you will take the trouble to master the details of the treatment, you will have much satisfaction in carrying them out and your patients will have great reason to be grateful to you for added comfort in living and for much prolongation of life, even though it be on a somewhat lower level of activity.

SOME NEGLECTED FACTORS IN THE PREVENTION OF DISEASE.[1]

By **Frank S. Hone, B.A., M.B., B.S.,**

Honorary Assistant Physician, Adelaide Hospital; Lecturer on Clinical Medicine, Adelaide University; Chief Quarantine Officer, South Australia.

Early this year my partner was called to a house and found two children suffering from scarlet fever under conditions which made effective isolation impossible. They were accordingly sent to the Isolation Block at the Adelaide Hospital. A few days later I saw two children at a boarding school who were also suffering from scarlet fever. We tried in vain to get other accommodation or a private hospital to receive them; their continued presence at the school involved by law its continued closure and so they were sent reluctantly by their relatives to the same Isolation Block. The next day a ward of the State came into my surgery, was seen to be suffering from mild scarlet fever and was sent straight up into isolation at the same place.

About five weeks later I heard that this last-mentioned child was to return home next day, but these instructions were suddenly countermanded. Later, I learnt that this was owing to the child having developed diphtheria. Next day I discovered that the two children of the first-mentioned family had been returned home a few days previously and had been that day sent back to the Isolation Block with diphtheria. Next day two more children in that house were down with diphtheria and a day or two later the mother of the family. In the meanwhile one of the boarding school children during this same week, although still in the Isolation Block, had developed glandular swelling of the neck, which subsequently proved to be a laryngeal diphtheria and required 15,000 units of diphtheria antitoxin. He went through a very severe attack, returned home with a badly damaged heart and he has been in bed at home until the last few weeks and still has marked albuminuria and is far from well. It is quite evident that all these children contracted their diphtheria while still in the Isolation Block. The net result is that from three different group of patients with scarlet fever sent into Isolation, we had seven cases of diphtheria, which otherwise would never have occurred, and one boy damaged for life.

I am not writing this to blame anybody. There was at the time an undue prevalence of scarlet fever cases. The accommodation block at the Adelaide Hospital was most severely and unfairly overtaxed. The convalescent scarlatina patients had to be allowed to overflow into the passage ways. Under the circumstances, it would have been almost impossible to avoid the cross infection that occurred. The Chairman of the Hospital Board in his last annual report says:—

> The total admission to the Isolation Block for the past three years have been 707, 530 and 689 respectively and the available accommodation in the existing block has on many occasions been taxed to the utmost. The buildings are not of modern design and a good deal of extra work and general inconvenience to the nursing staff is caused thereby. At present there are 37 cubicles, also two double rooms and two dormitories, taking each six beds, and two large sheds for 13 and eight beds respectively. More accommodation is especially required for the many convalescent children who must be detained in hospital during the necessary period of isolation.

Previous annual reports of the Adelaide Hospital have uttered similar warnings. The hospital authorities, therefore, can hardly be blamed for the existing state of affairs.

It will be noted that this is all the permanent accommodation provided for acute infectious cases in the State and I believe I am correct in stating that the two sheds mentioned were only fitted up at the beginning of the year, in consequence of the threatened influenza outbreak. If anyone is to blame, I am amongst them. In the previous 12 months I had charge of three different patients with diphtheria who developed

[1] Read at a Meeting of the South Australian Branch of the British Medical Association on August 18, 1919.

the symptoms of diphtheritic paralysis subsequent to their release from isolation as non-infective. One of them had cardiac manifestations and inquiry revealed that these patients had to be sent out in ten days or so of the onset of the infection, because of the limited accommodation available. That seems to be a most dangerous proceeding. But that has rather to do with the sequelæ than with the contraction of other infectious disease.

But in the same year I had a child who developed varicella almost a week after release from the Isolation Block where he had been present about four weeks. A colleague has told me of a case of measles occurring under similar circumstances, which proved conclusively that the infection had been contracted in isolation. And, knowing this, I should have refrained from silently acquiescing in a policy that exposes patients to fresh infection. It needed the sudden shock of these cases and particularly of the laryngeal diphtheria to waken me to the full bearing of these facts. It now appears to me that at present the primary factor necessary in this State to prevent infectious disease is the immediate provision of adequate isolation hospital accommodation. The duty of insisting that this be done would seem to devolve upon us as a profession.

If the duly constituted advisers of the Government can bring no effective pressure to bear, if the authorities are so oblivious of the welfare of children who are their wards (as in this one case mentioned), if no notice be taken of representations of hospital boards, it seems to me that it is our duty to make some move in the matter, not only in the interests of the public, but in self-protection. We are compelled by law to notify these infectious cases. If isolation is not possible at home, that notification results in the patient being removed to isolation. But the cases mentioned above, show there is quite a possibility of the patient thus being caused to run a risk of fresh infection or even death, which would not have occurred had the patient stayed at home. I respectfully submit that no Government has any right to thrust on us such a responsibility. As things are, any member of the profession is liable to be put into this invidious position. Either we should be relieved of the necessity for notifying, or adequate provision should be made for these patients who, for the protection of the public, need isolation. If, in the interests of the rest of the public, these patients need to be removed from their own homes, there should be adequate safeguards that they themselves are protected from incurring fresh infection with the consequent risks.

In order that any protest we make may be effective, we need to be quite clear on the present position. The *Public Health Act* of 1898 recognized the responsibilities that would ultimately follow on notification and gave local boards power to erect or to combine to erect hospitals for infectious diseases. The actual clause of the Act reads thus:—

> Section 144: Any Local Board may provide or combine with any other Local Boards to provide for the use of inhabitants of the district, hospitals or temporary places for the reception of any person suffering from any infectious disease and for that purpose may:—
>
> (1) Build such hospitals or places.
>
> (2) Contract for the use of any hospital or part of a hospital or place.
>
> (3) Arrange with any person for the reception of the suffering.
>
> Section 145: Any expenses incurred by a Local Board in maintaining any such person shall be deemed to be a debt due from such person to the Local Board.

Although over 30 years have elapsed since this Act came into force, no local board or combination of local boards has attempted to build any hospital for the accommodation of persons suffering from infectious diseases. Outside the metropolitan area absolutely nothing has been done by local boards to provide accommodation for such persons. In fact, I believe I am correct in saying that at Port Pirie when the Government, in response to local agitation a few years ago, were prepared to build an infectious diseases ward as an addition to the local hospital, the local board refused to accept any financial responsibility.

In the metropolitan area £5,000 was secured from the Charity Commissioners about 1899 and an infectious diseases block was built at the Adelaide Hospital. Before it was completed the Board passed a resolution that local boards should not be charged for the maintenance of patients with infectious diseases. A few years later this block was converted into an eye ward and thus alienated from the purposes for which it was built. Subsequently, accommodation was provided in part of the old Mental Hospital, the other part being used for patients with chronic tuberculosis. Agreements were entered into with various local boards for the reception of infectious cases at a fixed rate per case, but these agreements were not legalized till about 1915. Now all but two of the local boards in the metropolitan area have signed this agreement, but it still contains the proviso "provided accommodation is available." The last report of the Adelaide Hospital, quoted above, shows how limited is that accommodation. Although during the past twenty years the population of Adelaide and suburbs has increased out of all knowledge, although we have had a new reservoir and various extension of deep drainage system to cope with this increase, the provision for infectious diseases remains practically the same as it was 15 years ago. Although the increase in travelling has necessitated a new railway station, although an electric tram service has been introduced, although the advent of motor cars and ambulances has revolutionized transport, there is not a single attempt to provide permanently accessible means of transport for these patients. There has been the same trouble about getting transport for each patient, although the Act gives power for provision of transport facilities.

Nothing has been done because for the greater part of this time arrangements were fairly satisfactory. The first warning of inadequacy was given at the time of the cerebro-spinal meningitis outbreak four years ago. The cases I have narrated above show that that inadequacy extends now to ordinary periods. The experiences of the present year with influenza show the shifts to which we are put in extraordinary epidemics. The beginning of the recent influenza epidemic saw the Adelaide Hospital providing a shed capable of accommodating 20 patients. In a fort-

night this was not sufficient to cope with the infections contracted within the Hospital itself.

I think the time has come when we should say definitely to the Government:—

(1) That we are utterly dissatisfied with the present arrangements for the isolation of persons suffering from infectious diseases.
(2) That it is no part of the work of a general hospital to provide accommodation for the infectious cases of the community generally.
(3) That the isolation block at the Adelaide Hospital should be reserved for infections arising in the Hospital and for suspects.
(4) That a site should be obtained at once for the accommodation of persons with notifiable infectious diseases under separate management, either in whole or in part.

The present is a peculiarly opportune time to press this. With the experience of the recent influenza epidemic in our mind, we need make no apologies for emphasizing the lessons we have learnt. We should, in fact, be failing in our duty as medical advisers if we did not do so. No one can look back on the hastily improvized hospitals for influenza, on the changes of policy in their control, on the variations in policy as regards finance without a sense of shame. We were all equally involved, so that, in saying this, we blame no one but ourselves. But struggling as we have been in a sea of mismanagement and unpreparedness, through the previous lack of vision and initiative on the part of ourselves and our predecessors, we should at least see to it that succeeding generations are not similarly involved, with no basal equipment or organization capable of being temporarily expanded according to need.

The only way to secure this is to insist on a well-defined policy on the lines laid down above. There is the more necessity for this because I am informed during the past week that the present Government, being compelled to find some other accommodation for influenza patients than the Exhibition Building, have been investigating the old Exhibition Building and are of opinion that at very little expense it could be converted into four wards. And, although this is a purely temporary measure, there is great danger of it being regarded as permanently adequate; than which there could be no greater mistake.

Objection will, of course, be raised to the above proposals. Wherever a site is proposed, there will be a hideous outcry from property owners in the immediate vicinity. This is partly from ignorance and partly from that unwillingness of anyone to sacrifice for the general community which is carried to its typical extreme by the war profiteer and the conscientious objector. The same spirit is at the bottom of both.

There will, of course, also be the cry of cost. Both administrators and public need to realize that no great sum need be spent on buildings, as long as water and sanitation are provided on an ample scale. All that is required is the erection of small, separate pavilions with a comparatively short expectation of life. No building need last more than 20 or 30 years. With the reduction of military hospitals, such buildings and equipment will be probably available at a low price during the next year or two and should be acquired. The following extract from the Adelaide Hospital reports bears this out:—

> The small cost at which the extra accommodation was hastily prepared at the infectious diseases block suggests how easily a more suitable isolation hospital might be provided: a hospital consisting of a number of open pavilions conveniently grouped round an administrative block. This would deal more adequately with infectious diseases that are constantly present with us and, if placed on ample grounds, could be readily expanded to cope with a sudden widespread epidemic. The present Infectious Diseases Block is a poor makeshift. It is frequently overcrowded and the arrangement of buildings is unsuitable for effective isolation or proper treatment. The majority of patients are children and it is pitiable that they should be crowded in its corridors and cells, when the State might well provide something of the sort suggested.

The problem of the infectious hospital is quite different from that of general hospitals, whose services are always required at approximately the same level. The infectious hospital, on the other hand, may be comparatively inactive for months and then in a short time four different types of infection may be raging. What is required is flexibility and elasticity; a permanent nucleus with capacity for rapid extension. During the last six months at the local Quarantine Station we have had influenza, malaria and venereal disease at the same time and at the height of the rush we had accommodation for small pox available in a separate quarter. With the original hospital accommodation for only eight, we have accommodated over 50 at a time. A water and drainage system originally provided on an ample scale for 250 persons sufficed for over 500. We have not had a single cross-infection and only one instance of a nurse or attendant contracting influenza.

And if we are going to talk of cost, take the first six months' figures of this year. Three hundred and thirty-six deaths from influenza from February to June, 240 affecting persons between 21 and 50 years. Two thirds of them were males and two thirds married. Not a solitary pregnant woman that I know of who developed pneumonia in the late months of pregnancy, escaped with her life. In each of these cases two lives were lost. In the House of Assembly yesterday it was stated that the experience had cost the Government £100,000. That is apart from these deaths. Four hundred deaths from influenza direct in the 12 months is a very low estimate. Taking the accepted standard of each adult life being worth £300 to the State, that means a loss of £120,000 this year, apart from the economic loss through loss of the labour of those ill and recovering. Supposing such an epidemic occurs only once in 20 years, is it not better to spread expenditure over a series of years to try to save some of this loss? That expenditure would serve also to lessen the loss from the 1,124 deaths that have occurred in this State in the last ten years from measles, scarlatina, whooping cough and diphtheria.

The politician will only spend the money if public pressure is brought to bear. If the public understood these things, they would not need pressure to spend the money. That they do not understand these things is largely our fault as a profession. For there are 15 medical officers of health in and around Adelaide. I do not remember hearing a single paper by anyone of them at our meetings during the past 20 years on

how infectious diseases should be lessened. This state of affairs in our midst depends largely on two other factors that are overlooked. The first is that as a profession we have not yet sufficiently emphasized what, for want of a better term, I must term the personal infector.

Roughly speaking infectious diseases are of three classes:—

(1) Those parasitic to lower animals or conveyed to man through the agency of such intermediary, directly or indirectly. In this list are yellow fever, malaria, plague, typhus and partly bilharziosis and hydatids.

(2) Those conveyed by contamination of food or water, such as typhoid and its kin, cholera and partly, again, hydatids and bilharziosis. Certain diseases such as bilharziosis, hydatid and fly-borne infections of food, like colitis, may be included in both these diseases.

(3) Those conveyed directly from one individual to another. These compose the most common infections, such as whooping cough, diphtheria, scarlet fever, measles, influenza.

It will be noticed that I have left out all mention of fomites, because, although I do not expect everyone to agree with me, increasing experience convinces me that they are negligible.

In this State our attention has been rather concentrated on the measures which stamp out the first two classes, *viz.*, improvement of food supplies and sanitation. For any great advance to be made we need to concentrate now on the individual in all his bearings.

(1) Whether he is infective or exposed to infection. The typical instance of the results following the latter policy is of course the original vaccination against small-pox. Later we have the results of anti-typhoid and anti-tetanus inoculation in the recent war. Unless, however, we are prepared to inoculate everyone with an pancratic—not pancreatic—vaccine, I think this procedure will ultimately be reserved for those exposed to special dangers as, for instance, anti-typhoid inoculation of nurses beginning hospital training, of navvies entering construction camps, and so on.

(2) The striking results that would result from the following up of infective individuals is shown by the chart which I show to-night (I do not feel at liberty to publish this, as it is a piece of original work which is being used for an M.D. thesis). Briefly, it may be stated that in an isolated community whose diphtheria returns for three years past showed a curve rising to nearly 70 cases each May to July, the systematic swabbing of all school children's throats was undertaken in November, 1918, with subsequent segregation and treatment of those shown to be carriers (about 1%), with the result that this year's curve shows a fall almost to zero.

Imagine what would happen if we showed the same care in following up every person convalescent from typhoid fever before allowing him to leave hospital. The same thing is proved by the reverse difficulty we have in influenza where the inefficacy of any administrative control of the disease, once it has entered a ship or city or country, lies wholly in our present inability to say exactly who has influenza and is therefore infective.

In all infective diseases which are most common, this personal infectiveness or infectivity should be the main method of attack in prevention. We have recognized this in dealing with the venereal diseases question. Our aim now is to have full control of the individual and all recent administrative enactments have been directed to that end. What we need is in our thinking and practical administration to follow the same line with all these other infections of which we have been speaking—the spread of which is mainly directed from individual to individual. To secure this there is urgent necessity for a revision of our medical curriculum by which the inculcation of the preventive ideal shall be put in the forefront of the course. At present in our own University the student has no instruction on the prevention of disease. He is given a text-book on hygiene and public health in the last year of his course; he has to read it himself and he enters on the examination in the proud consciousness that no one has ever yet been plucked in the subject. What sort of an idea of its importance does he get from this?

This, of course, is because the curriculum was laid down 30 years or more and has not yet been altered. Now in those days, medicine was dealt with wholly from the curative or the *post mortem* point of view.

To-day we classify disease roughly under six heads:

(1) Congenital deformities and abnormalities and their results.
(2) Traumatisms and other after effects, including extrinsic poisons.
(3) Occupational diseases.
(4) Bio-chemical alterations in metabolism.
(5) Disproportion of internal secretions.
(6) Infections and their after effects.

One has only to compare the section headed "infectious diseases" in Osler to-day with that of Bristowe 30 years ago to realize the tremendous alteration in outlook that has supervened. Pneumonia, rheumatism and kindred complaints have been transferred from "local" or "constitutional" diseases to the infectious section. Nor is this the whole alteration. Judging from the results of investigations as to the action of infections on adrenal secretion, it is more than probable that many of the relative disproportions in internal secretions owe their origin to infection and I could give quite a series of cases under heading (1) where women with hydrocephalic babies in two successive pregnancies or other monstrosities, gave birth to healthy children when treated with *hydrargyrum cum creta* during subsequent pregnancies. More and more we see how much of what we call disease is an after-effect of some infection.

Yet this alteration in outlook is not reflected in our teaching. The student learns in his physiology the amount of oxygen necessary for respiration or of the processes involved in the digestion of food and there is no attempt to relate these to prevention of pathological processes which arise through transgression of physiological rules. He learns bacteriology with a view to diagnosis of disease, but without a thought of how to apply that knowledge to prevent

disease. He is taught surgical asepsis without a thought of securing medical asepsis in the State.

The older members can remember the day when the abolition of surgical infections from a hospital was a dream. That dream has been fulfilled by successive generations of teachers pursuing an ideal in spite of discouragements from colleagues, in spite of repeated failures, until now the young graduate wanders round the abdomen, that Paradise of the surgeon, with the innocence of Adam. And if evil results from transgression, he can always blame the spirochæte. For surgical infection substitute medical infection, for the hospital substitute the State and we are in exactly the same position in medicine as we were 30 years ago in surgery. A few men are trying by faulty methods to check the introduction of infection to a State, or to check its spread from individual to individual in the State. They succeed in one disease and fail with another; they use inhalation chambers, like our ancestors used the carbolic spray. When failures occur, as they must occur, they have colleagues who say: "Why not let it run unchecked?" To some there are still laudable infections in childhood, just as there used to be laudable pus. And the only way to bring about an improvement is to reflect in our teaching the possibility of prevention of medical sepsis, as we have done for surgical sepsis during the past degeneration.

Reports of Cases.

AN UNCOMMON CASE OF FOREIGN BODY IN THE EYE.

By **Hugh G. Allen M.B., Ch.M.,**
Honorary Ophthalmic Surgeon, Newcastle Hospital.

Mr. D. consulted me on January 9, 1920, with the following history: Whilst cutting some prairie grass in October, 1919, (three months previously), he suddenly experienced pain in the left eye and concluded he had got some foreign body in his eye. For several days following he experienced pain on moving the eye and soon a slight injection, with some lachrymation, followed. No foreign body could be detected and although the tarsal plate was everted by his wife, nothing could be found. The symptoms of pain and irritability of the eye persisted for about a week and gradually settled down, but a slight mucous discharge persisted and some redness of the eye. Periodically the patient experienced some severe pain in the eye and the sensation of pricking under the upper lid. A medical practitioner was consulted; an attack of conjunctivitis was diagnosed, but no foreign body was detected. When I saw the patient three months after the onset of the trouble, the eye appeared somewhat watery, with only a slight conjunctival injection; there was a little fullness of the upper lid just below the eyebrow. On everting the upper lid, nothing was detected and although the history suggested a foreign body being present, apparently there was nothing. A small nodule of granulation tissue appeared from under the lower convex border of the tarsal plate and on double everting the tarsus and examining the retro-tarsal fold, a foreign body embedded in granulation tissue was found and extracted. The foreign body was a piece of prairie grass and measured 15 mm. × 1.5 mm. × 1 mm..

My apology for publishing this case is simply to show how a foreign body of such dimensions can be accommodated in the conjunctival sac and avoid detection for so long. The slight fullness of the upper lid was caused by the foreign body and granulation tissue in the retrotarsal fold, but no definite change could be detected by palpation of the lid. The foreign body was greenish in colour and did not show much evidence of decomposition.

Naval and Military.

HONOURS.

Abstracts from the *London Gazette*, dealing with awards and decorations have been published in the *Commonwealth of Australia Gazette*, No. 10, of January 29, 1920. The announcements affecting members of the medical profession have already been published in this journal on the dates printed in parentheses.

Lieutenant-Colonel John Kellerman Adey appointed an Officer of the Most Excellent Order of the British Empire (August 20, 1919, page 98).

Major Robert Fulton Craig awarded the Distinguished Service Order (December 13, 1919, page 519).

Captain Leslie Thomas Allsop awarded the Military Cross (December 13, 1919, page 519).

Captain William Johnstone Binns awarded the Military Cross (December 13, 1919, page 519).

Captain Albert Edward Wooward awarded the Military Cross (December 27, 1919, page 557).

Captain Joseph Ringland Anderson awarded the Military Cross (December 13, 1919, page 519).

Captain Arthur Poole Lawrence awarded the Military Cross (December 27, 1919, page 557).

In the *London Gazette* of December 12, 1919, it was announced that the following members of the Australian Army Medical Corps have received distinction in connexion with military service:—

Distinguished Service Order.

Lieutenant-Colonel Robert McNeil Beith, Australian Army Medical Corps, attached 2nd Light Horse Field Ambulance.

Lieutenant-Colonel Meylies Wyamarus Cave, Australian Army Medical Corps, attached 1st Light Horse Field Ambulance.

Commander of the Order of the British Empire.

Colonel Bernard James Newmarch, C.M.G., Australian Army Medical Corps.

Lieutenant-Colonel Henry Simpson Newland, D.S.O., Australian Army Medical Corps.

Officer of the Order of the British Empire.

Captain (temporary Major) Harvey Sutton, Australian Army Medical Corps.

Captain Francis Aloysius Comins, Australian Army Medical Corps.

Major Thomas Lynewolde Anderson, Australian Army Medical Corps.

Major Joseph Patrick Fogarty, M.C., Australian Army Medical Corps.

Major Charles Herbert Terry, Australian Army Medical Corps.

Captain John Herald Balfour Brown, M.C., Australian Army Medical Corps.

Captain George Finlay, Australian Army Medical Corps.

APPOINTMENTS.

The following appointments, etc., have been announced in the *Commonwealth of Australia Gazette*, No. 10, of January 29, 1920:—

Australian Imperial Force.

Second Military District.

Major A. W. H. a'Court, Australian Army Medical Corps, relinquished the temporary appointment of Deputy Assistant Director Medical Services, Australian Corps, 23rd April, 1919.

Major V. M. Coppleson, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 27th October, 1919, but to take effect from 19th December, 1919.

Captain (Temporary Major) H. G. Leahy, Australian Army Medical Corps, relinquished the temporary rank of Major, and is granted the honorary rank of Major, 30th August, 1919.

Captain J. McPherson, Australian Army Medical Corps. The notification regarding this officer which appeared in Executive Minute No. 868, promulgated on page 2469 of *Commonwealth of Australia Gazette*, No. 138/19, is cancelled.

Major E. K. Parry, M.C., Australian Army Medical Corps, is granted the honorary rank of Lieutenant-Colonel, 19th May, 1919.

Third Military District.

Major D. J. W. Browne, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 29th October, 1919, but to take effect from 28th December, 1919.

Major T. R. E. Davis, Australian Army Medical Corps, ceased to officiate as Assistant Director Medical Services, Headquarters, Australian Imperial Force, 31st October, 1919.

Major T. R. E. Davis, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 31st October, 1919, but to take effect from 8th December, 1919.

Major (Temporary Lieutenant-Colonel) N. H. Fairley, O.B.E., Australian Army Medical Corps, relinquished the temporary rank of Lieutenant-Colonel and is granted the honorary rank of Lieutenant-Colonel, 26th June, 1919.

Robert Trevor Fetherstonhaugh to be Captain, Australian Army Medical Corps, 9th October, 1916. (The Christian names of this officer should be as now shown, and not as stated in Executive Minute, No. 972, promulgated on page 3149 of *Commonwealth of Australia Gazette*, No. 166/16).

Captain J. S. Green, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 8th October, 1919, but to take effect from 23rd October, 1919.

Major W. A. Hailes, D.S.O., Australian Army Medical Corps. (The notification regarding the resignation of the appointment of this officer, which appeared in Executive Minute, No. 868, promulgated on page 2470 of *Commonwealth of Australia Gazette*, No. 138/19, is cancelled.

Captain J. Morlet, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 7th November, 1919, but to take effect from 21st November, 1919.

Captain (Temporary Major) A. B. McCutcheon, Australian Army Medical Corps, relinquished the temporary rank of Major, and is granted the honorary rank of Major, 17th October, 1919.

Captain J. E. Shelley, Australian Army Medical Corps, having resigned, his appointment in the Australian Imperial Force is terminated in England on 30th October, 1919, but to take effect from 26th December, 1919.

Sixth Military District.

Captain (Temporary Major) H. A. S. Newton, Australian Army Medical Corps, relinquished the temporary rank of Major, and is granted the honorary rank of Major, 31st October, 1919.

APPOINTMENTS TERMINATED.

Second Military District.

Major N. M. Gibson, O.B.E., 14th January, 1920.
Major R. E. Jefferis, 16th January, 1920.
Captain G. P. Arnold, M.C., 9th January, 1920.
Captain T. G. Allen, 2nd December, 1919.
Captain H. Symonds, 15th January, 1920.
Captain R. E. Nowland, M.C., 20th December, 1919.
Captain W. F. Pattinson, 5th December, 1919.
Captain A. R. Hudson, 16th December, 1919.
Captain J. M. Maclean, 17th December, 1919.
Captain J. McF. Rossell, 15th January, 1920.
Captain G. C. W. Holmes, 6th December. 1919.
Captain R. M. Allport. 10th December, 1919.
Captain T. Y. Nelson, 25th November, 1919.
Captain J. H. Hornbrook, 2nd December, 1919.
Captain F. N. Waddell, 1st January, 1920.
Captain C. R. Campling, 28th October, 1919.
Captain A. McC. Luker, 1st December, 1919.

Third Military District.

Major E. R. Cordner, 27th January, 1920.
Major P. A. Maplestone, D.S.O., 13th January, 1920.
Captain J. L. Ross-Soden, 27th January, 1920.
Captain C. E. Watson, M.C., 20th July, 1919.
Captain J. R. Anderson, M.C., 27th November, 1919.

Lieutenant-Colonel (Brevet-Colonel) B. J. Newmarsh, C.M.G., C.B.E., V.D., has been mobilized for full-time duty as President of the Permanent Referee Board in the 2nd Military District.

MEDICAL OFFICERS' RELIEF FUND (FEDERAL).

The trustees acknowledge with thanks the receipt of the following donations and promises towards the above-named Fund:—

(FOURTEENTH LIST.)

New South Wales.

	£	s.	d.
Dr. J. Preston Hocken	20	0	0
Dr. R. V. Graham (additional)	10	10	0
Dr. C. W. Bruce (additional)	10	0	0
Dr. W. G. Armstrong	10	0	0
Dr. E. W. Buckley	10	0	0
Senate Campaign Committee	6	17	3
Anonymous (*a*) (additional)	5	0	0
Anonymous (*b*) (additional)	5	0	0
Dr. Leslie Utz	3	3	0
Dr. T. C. C. Evans (additional)	1	1	0

South Australia.

Dr. H. F. Shorney	150	0	0
Dr. L. Ll. Davey	20	0	0
Dr. A. J. J. Triado	5	0	0

Victoria.

Dr. Norman Wilson	15	15	0
Dr. E. W. Sutcliffe	10	10	0
Dr. M. D. Nesbitt	5	0	0

Total to February 10, 1920, £11,496 17s. 10d..

For many years those who have habitually used the *Index Medicus*, have experienced difficulty and disappointment because the annual index, which forms the key to the monthly numbers, has appeared several months after the end of each year. The work of compiling this alphabetical index of authors and subjects is necessarily an arduous one and it was obviously impossible to expedite its preparation. The Carnegie Institute of Washington has given this matter their careful consideration and are now prepared to alter the method of bibliographical arrangement to obviate the inherent defect, if the majority of subscribers are in favour of such a change. It is suggested that the *Index Medicus* should be issued in four quarterly volumes, containing first a quarterly list of new medical books and, second, a quarterly bibliography arranged in dictionary order by subject. The annual author-index would be issued on completion of the volume. We feel sure that the change contemplated will facilitate the use of this valuable production.

Dr. T. E. Victor Hurley, C.M.G., has been appointed Sub-Dean of the Clinical School of the Melbourne Hospital. Dr. W. Kent Hughes is the Dean of the Clinical School.

We learn that Lieutenant-Colonel N. Hamilton Fairley, O.B.E., has been a successful candidate at the examination recently held for the membership of the Royal College of Physicians of London.

The Medical Journal of Australia.

SATURDAY, FEBRUARY 14, 1920.

The Teaching of Preventive Medicine.

To the majority of the members of the medical profession the practice of medicine means the treatment of disease. The importance of prevention is recognized and every practitioner is willing to assist in any reasonable campaign aiming at the eradication of a particular disease. It is felt, however, that the private practitioner has no direct obligations in connexion with this task. Prevention is supposed to belong to the State and its medical officers. The cause of this attitude is not far to seek. In the first place, the medical student is trained to recognize and to treat pathological conditions in the individual. He receives a little superficial instruction in hygiene, but is not expected to be expert in epidemiology, immunology, prophylaxis or any of the many other chapters of hygiene. When he enters practice he is engaged by his patient to combat an existing illness. Few persons consult their doctors concerning the best means of keeping well. The public has a sort of intuitive feeling that medical practitioners as a rule make little or no study of this wide problem. In the second place, prophylaxis depends in the main on concerted efforts to attack a disease in a community, rather than on an isolated attempt to preserve the individual. The citizen is naturally unwilling to engage the services of his medical attendant to stamp out any particular disease in the community. He, as well as his doctor, look to the State to provide the machinery and the money for the preservation of the public health. Throughout long generations this plan of leaving to the State and to a small number of enthusiastic departmental medical officers the duty of protecting the public against preventible diseases has been allowed to continue, notwithstanding its obvious defects. Gradually it has been brought to the notice of those responsible for the welfare of nations that the task of creating a healthy race is beset with stupendous difficulties and that these difficulties cannot be overcome unless the whole medical profession collaborates in a vast conspiracy to remove one disease at a time. During the war, when the conditions were all in favour of disease, a great medical service was used to check communicable disease and to maintain health and physical vigour among the troops. This organized attack proved eminently successful, although the problems were strange and in many respects new. In civil life slight use has been made of the opportunities and knowledge of the medical practitioner for some years in regard to a few infective diseases. More recently steps have been taken to extend the principle of enlisting the co-operation of the general medical practitioner for the purpose of preventing disease. There is, however, unmistakable evidence that success cannot be attained until the mass of the medical profession is trained in the sciences of preventive medicine and is persuaded to regard communal activities as an important part of its functions.

In the present issue we publish a brief record of the proceedings of the Federal Committee of the British Medical Association in Australia. The Committee discussed the means of giving effect to its previous proposals in connexion with the extension of the public health services. Among other things, the Committee has advocated the creation of an advisory council of members of the medical profession outside the public service to lend assistance to the medical officers responsible for the administration of public health measures in regard to the means to be adopted for the prevention of disease. The Committee has further proposed that efforts should be concentrated in localized areas, with the object of eradicating certain infective diseases and for this purpose that the assistance of local medical practitioners should be sought. The educational value of these so-called local campaigns is great, for, with a relatively small expenditure of money, the feasibility of gaining an effective control over certain selected diseases can be demonstrated. The Federal Committee recognizes the necessity for skilled training of students in preventive medicine and has appealed to the Federal Government to endow chairs of preventive medicine in the universities containing medical schools.

We are fortunate in being able to publish in this issue an eloquent appeal for the proper teaching of

preventive medicine by Dr. F. S. Hone. It would be redundant to recapitulate the arguments put forward in this article. They are clearly expressed and incontrovertible. This article comes as a fitting supplement to the considered decision of the Federal Committee. The issue at present is quite simple. The medical profession as a whole must extend its duties and must accept a measure of responsibility in regard to the continued existence in the community of preventible disease. Before that responsibility can be placed on the shoulders of the general medical practitioner, he must be properly equipped. This involves a change in principle in connexion with the education of medical students. In the past we have recognized two ultimate sciences in our profession—medicine and surgery. To-day we must add a third—preventive medicine. It may be difficult to make the adjustment. Older practitioners have thought of prophylaxis as a chapter of medicine proper, just as treatment is but a chapter. This form of prophylaxis, however, is extremely limited and is not identical with preventive medicine in its real significance. Similarly, it will be necessary to remove the conception that hygiene means the same thing as sanitation. Hygiene embraces everything appertaining to the health of the community, from the stage of intrauterine life to the final stage in the crematorium. The disposal of the excreta and of household waste is a relatively small chapter of hygiene. The professors of preventive medicine will necessarily have to direct the teaching of all the important chapters of hygiene and communal prophylaxis. Theirs will probably be a task even more difficult than that of the professor of medicine or the professor of surgery.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

In 1908 H. T. Bulstrode, writing in a report to the President of the Local Government Board of England on sanatoria for consumption, pointed out that the immediate results of sanatorium treatment were in the majority of cases encouraging. He found at that time that the data concerning the ultimate results were so sparse that no definite conclusions could be drawn, although he did not hesitate in forming a favourable opinion. This opinion was based on the evidence then available of the relative frequency of apparent arrest of disease when the patients were admitted to the sanatoria at an early stage. It must be remembered that the sanatorium movement began in England about the year 1900. Fifty years before that date the mortality from pulmonary tuberculosis was roughly 26 per 10,000 of population. In 1900 it had receded to 13 per 10,000. This striking reduction in mortality does not appear to have been associated with a parallel reduction in the incidence of the disease, although it must be admitted that exact statistics of infection did not exist. Clinical experience has compelled physicians to regard sanatorium treatment as a curative agent. The introduction of this treatment should therefore have accelerated the reduction in the mortality from tuberculosis of the lung. It is of the utmost importance that information should be collected concerning the actual effect of sanatorium treatment on the mortality of the disease. Dr. Noel Bardswell and Mr. J. H. R. Thompson have conducted an inquiry into this question for the Medical Research Committee. They have utilized the statistics of the King Edward VII. Sanatorium at Midhurst, statistics which have been collected with great diligence and care. The report issued on this study[1] is a very valuable one and when taken in conjunction with the work of Elderton and Perry on the statistics of the Adirondack Sanitarium, it represents the most authoritative pronouncement yet published. It is highly significant that persistence on the part of the staff of the Sanatorium has resulted in the collection of the full after-history of 96.5% of the patients discharged between the years 1907 and 1914. It is impossible to discuss all the points raised in the report within the compass of a short article. The reader interested in the details of handling the figures is referred to the original report. Suffice it to state in this place that the effect of the treatment was gauged by a comparison between the actual number of deaths among those discharged and the expected deaths, calculated on an actuarial basis for a similar number of persons of the general community of corresponding ages. The general community was chosen rather than a community of selected "first-class lives," because the former included a definite proportion of persons suffering from tuberculosis. Unfortunately, no figures exist for the determination of the expectation of life of tubercular patients treated by methods other than the sanatorium method. The authors show that the ratio of the actual number of deaths to the number of deaths "expected" was 6.4 to 1 and 4.7 to 1 for males and females respectively for those patients who were in the first stage of the disease on admission to the Sanatorium. The stage II. patients showed a ratio of 15.6 and 19 for males and females respectively. The ratio for the stage III. patients was 39.2 and 27.5. The ratio reached its highest point during the first two or three years after discharge. The tables show that the mortality was exceptionally heavy among young patients. In the next place, they examined the mortality arranged according to the condition of the patients at the time of discharge. The mortality among the patients discharged with their disease arrested was approximately four times that of the general population, while the mortality among the patients who were much improved at the time of discharge was approximately twelve times as high as the mortality among the general population. The ratio of actual deaths

[1] Pulmonary Tuberculosis: Mortality After Sanatorium Treatment; National Health Insurance, Medical Research Committee, Special Report Series, No. 33, 1919.

to expected deaths among those discharged "improved" was 30 to 1, while that among the patients discharged "worse" was over 60 to 1. They found that when the disease was arrested, the condition on admission had no appreciable effect on the prognosis. On the other hand, when the patient was either improved or worse after the course, the condition at the time of admission was of considerable prognostic importance. A further inquiry was instituted with the view of ascertaining the influence of the mode of onset on the course of the disease. The figures showed quite clearly that an insidious onset, with cough or other indefinite symptom, proved unfavourable, probably because the patient sought treatment at a late date. Hæmoptysis or pleurisy, occurring as the initial sign, led to the prompt adoption of measures of treatment, with a corresponding improvement in the prognosis. They have further demonstrated that the course of the disease is scarcely less favourable in patients whose sputum contained tubercle bacilli on admission but none on discharge, than in patients with closed tuberculosis. In those cases in which the bacilli do not disappear from the sputum in response to the treatment, the prognosis is bad, although some patients of this group live useful lives for a considerable period. Pulmonary tuberculosis complicated by laryngeal disease is a serious condition. When the laryngeal disease is early and the pulmonary involvement in the first stage, the ratio of actual to expected deaths is but 2.4 times. In the last place, the statistics showed that a patient with a consumptive history, having contracted pulmonary tuberculosis, enjoys the same chances of recovery as a patient whose family history is free from this disease. The patient's condition on admission is a more potent factor in prognosis than his family antecedents. Taking all the factors together, the authors are forced to the opinion that the results of sanatorium treatment are by no means satisfactory. Better organization and improved methods are needed.

They devote a chapter to the effect of tuberculin on the mortality rate. They adopted many methods to guide them to a correct estimation of the results. Their controls were selected from the patients admitted during the years 1908, 1909 and 1910. Great pains were expended in selecting patients whose condition and general treatment corresponded closely with the condition and treatment of the patients treated with tuberculin. The figures reveal that the mortality was not reduced by the treatment, although the patients admitted to the Sanatorium in the first stage of the disease showed a slight improvement as compared with the control patients. The latter, however, when tested from every point of view, appear to have as good a chance of recovery. They state that the conclusions arrived at as to the value of tuberculin must be deemed to be distinctly disappointing.

TRYPANOSOMIASIS.

Trypanosomiasis has long been known to be endemic in the western coastal regions of Africa, between the Senegal River and the River Coanza. It has spread eastwards along the Congo River and has been discovered on the Belgian side of Lake Tanganyika; it occurs in Uganda and around Lake Victoria Nyanza and on some of the lake islands; it is said to have been encountered in German East Africa along the River Rovuma and may have penetrated Portuguese East Africa. The same disease has been found in the West Indies and in South America. The spread to other parts of the world must depend on the presence or importation of the tsetse fly, as well as of infected natives or white men. The bare possibility of an artificial transference of this extraordinary disease to other parts of the British Empire has impelled the military authorities responsible for the campaign in German East Africa to collect information concerning the disease during the period of active operations. From 1914 onward Lieutenant-Colonel H. B. G. Newham, C.M.G., the Consultant in Tropical Diseases of the East African Expeditionary Force, carried out this task.[1] Although he admits that there may have been some unrecognized cases, not a single instance of the disease was seen until March, 1918. The British troops did not reach the southern part of German East Africa until late in 1917. Prior to this they occupied areas from which no reports of trypanosomiasis had previously been received. On arrival in the neighbourhood of the Rovuma River, lines of communication were established from Port Amelia, in Portuguese East Africa, and in this district they encountered the first cases. Patients with sleeping sickness were found as far south as Mozambique. Captain McGregor undertook an investigation of the flies in the different districts traversed. Between Bandari and Anquabe not a single specimen of *Glossina palpalis* was seen, although *G. pallidipes* was extremely common and *G. morsitans* was caught. *G. fusca* and *G. brevipalpis* were taken between Lindi and Ngomano. In nearly every district *Glossina morsitans* was much more prevalent than the other species. About 11% of the tsetse flies were found to be infected with a trypanosome, which is probably *Trypanosoma rhodesiense*. Lieutenant-Colonel Newham points out that in nearly every case the symptoms were not those usually associated with trypanosome infections. Irregular fever, with some headache, was common and the patients thought that they were suffering from malaria. Enlargement of the superficial lymphatic glands was not often seen. The author did not meet with œdema of the eyelids or of the face or with considerable splenic enlargement. A rash limited to the trunk, in the form of faint erythematous rings, was seen in one or two cases only. Kerandel's sign of deep hyperæsthesia was noted once. In the last place increased rate of the heart beat was noted in all cases during the early stages. It thus appears that the diagnosis is dependent on the detection and recognition of the trypanosome. Lieutenant-Colonel Newham finds reason to fix the length of the incubation period at from five to fourteen days. The only treatment that proved at all effective was the intravenous injection of tartar emetic in doses of 0.15 gramme. Few patients, however, can tolerate this dose. Smaller doses are of little avail. In the treatment of sleeping sickness, it has to be borne in mind that malaria and spirochætal infections (relapsing fever) do not respond to antimony and that these conditions often accompany trypanosome infections.

[1] *Journal of the Royal Army Medical Corps*, October, 1919.

Abstracts from Current Medical Literature.

MEDICINE.

(57) Filariasis Conjunctivæ.

J. Graham Forbes gives some notes on filariasis in Macedonia and reports two cases of *filariasis conjunctivæ* in man, with the first recorded discovery of the male worm (*Journ. Royal Army Medical Corps*, November, 1919). *Filariasis conjunctivæ* is extremely rare in man. Its geographical distribution is confined to south-eastern Europe and it is known to occur in horses and asses. The parasite was first so named by Addario in 1885, being obtained from the eye, but it is not restricted to that organ. One of the author's patients noticed redness and swelling on the outer side of the upper forearm and in the skin over it two small puncture marks, suggesting the bite of an insect. A lump developed, which was painless. The forearm swelled and subsided several times. The skin was incised and a small cystic tumour firmly embedded in the subcutaneous tissue removed. On incision into this nodule a thread-like worm suddenly protruded. A full description of the male filaria is given. In removal the worm was cut and from the severed ends there poured a stream containing small round cells, displaying internally a faint cruciform structure, in all probability spermatozoa. The nodule from which the worm had been removed, failed to show a second or female worm, or evidence of microfilaria. The patient's blood showed 47% polymorphonuclear cells, 2% large mononuclear cells, 38% small lymphocytes, 8.5% large lymphocytes, 3.5% eosinophile cells and 1% basophile cells. There was no leucocytosis and no microfilaria were found in the blood day or night. In the second patient a painless swelling suddenly developed on the right side of the face and a tense cystic swelling appeared on the right side of the nose. This was dissected out and was found to contain a female *Filaria conjunctivæ*, 94 mm. in length. This is fully described and illustrated. No other filaria or embryos were found in the cyst. No microfilaria were found in the blood. Previously to Addario's description, Dubini had observed (but had not named) the immature female of this species in the eye of a man in Milan. Babes also described the same species in 1879 and 1880 as occurring in a calcified nodule in the gastro-splenic omentum of a woman in Buda-Pesth. He named it *F. peritonei hominis*. The male filaria was at first regarded as possibly *Onchocerca volvulus*, which gives rise to subcutaneous nodules in the natives of West and Central Africa, but has never been found in Europe or outside Africa. In the *Onchocerca* nodules also there are invariably at least two female and several male worms and many embryos. Both of the cases reported occurred in the neighbourhood of horse or mule lines. It is possible that the transmission of the embryos of *F. conjunctivæ* may be effected by one of the same mosquitoes responsible for the transmission of elephantiasis, or a biting fly, such as *Chrysops excutiens*, or the stable fly, *Stomoxys calcitrans*.

(58) Intramuscular Injection of Quinine in Malaria.

H. W. Wiltshire reports his experiences of Macedonian malaria (*Journ. Royal Army Med. Corps*, September, 1919). Intravenous injection of quinine produces the most powerful action against the parasites, but its use is limited by difficulties of technique and by the occurrence of serious symptoms, or even death, in certain cases. Patients treated by intramuscular injection usually receive 1.3 grammes twice daily for four days. On the fifth day treatment is continued by the mouth, the majority of patients receiving two grammes a day for a further period of three weeks at least. A sterilized 50% solution of quinine bi-hydrochloride is used for injection. Repeated heating has not appeared to detract from the therapeutic value of the solution. The author refers to the sudden catastrophies which are seen at times in patients supposed to be well under the influence of oral quinine. Sudden coma has occurred in patients who have taken two grammes of quinine daily for days and appear to be absorbing it well and even in patients who have apparently become convalescent. Intramuscular injection of quinine, in addition to safeguarding life, reduces fever and alleviates symptoms more surely and more quickly than the same dose given by mouth. This holds good, not only for cases of clogged liver and persistent vomiting, in which oral administration is useless, but also for those in which alimentary absorption appears to be good. The great obstacle in trying to affect a cure of malaria is the persistence of living parasites in the spleen and bone marrow, in which, for some reason, they gain a comparative immunity to quinine. But for this, every case could be cured in a week, since it is easy to clear the circulating blood of parasites. The disease would be stamped out, because carriers would cease to exist. Treatment by oral quinine usually leads to some improvement in general condition, but, in some cases, fails to alter the size of the spleen, to prevent relapses or to stop slight, irregular fever. In these cases intramuscular injections every four days are almost invariably followed by marked shrinking of the spleen and always by cessation of the slight fever, or an increased interval between relapses. It is not yet settled whether quinine taken by mouth is absorbed mainly from the stomach, as the bihydrochloride, or from the small intestine as a glycocholate; but in whatever form it actually enters the bloodstream, the entry must be very gradual and take place in a state of dilution which may be considered extreme as compared with intravenous or intramuscular injection. The author concludes that in Macedonian malaria, intramuscular injection of quinine has been found harmless and much superior to oral administration in these respects: (*a*) It improves the prognosis of life. (*b*) It is more certain in action during the acute stage of the disease. (*c*) It adds greatly to the chance of effecting a true cure of the disease. It is suggested that the real anti-parasitic agent is to be found in an unstable combination of quinine with a protein of the blood plasma; that the quinine which circulates in the blood in simple solution and is excreted in the urine unchanged, may be regarded as a waste product and is innocent of anti-parasitic effect; that some of the toxic effects produced by quinine on the body are due to the unchanged quinine which circulates in the blood in a state of simple solution.

(59) Hypertension.

Eli Moschcowitz deals fully with the significance and ætiology of hypertension and its relation to arterio-sclerosis and nephritis (*American Journ. Med. Sciences*, November, 1919). His conclusions are that a persistent hypertension represents a decompensation of the circulation. The phenomena of decompensation represent a progressive process and every persistent hypertension, unless complicating factors are introduced, will eventually result in the graver evidences of decompensation, represented by the clinical picture of cardiac insufficiency. The signs of decompensation may be both subjective and objective and there is only an approximate parallelism between the two. Subjective improvement or deterioration does not always correspond to objective improvement or deterioration and *vice versâ*. Many early cases of essential hypertension, in which both the systolic and the diastolic pressure are not too high, are, as far as present observations indicate, entirely curable. The classification of hypertension into essential, arterio-sclerotic and nephritic is not justifiable on ætiological grounds. Such a classification is merely clinical and teleological. On such a basis the classification should include the cerebral, cardiac (coronary) and aortic types in addition. The vast majority of disorders with persistent hypertension begin as "esential" hypertensions. If untreated they lead to the clinical concepts of arterio-sclerotic, nephritic and other hypertensions. All available evidence seems to show that arterio-sclerosis (with the possible exception of the decrescent form of Clifford Allbutt) is the result of the hypertension itself or (less likely) of the cause that brought about the hypertension. Albuminuria is not necessarily the result of injury of the kidney parenchyma. Badly diseased kidneys may be present without albuminuria. Albuminuria associated with cardio-vascular disorders is more the result of static circulatory changes within the kidney than due to direct injury of the kidney parenchyma. Clinical signs and functional tests are insufficient, except in a limited degree, to diagnose the anatomical type of nephritis that will be found at autopsy. A hypertension may occur with normal

kidneys. In many instances the pathological changes in the kidney of Bright's disease are the results rather than the cause of hypertension. Arteriosclerosis and Bright's disease have the same pathogenesis, the lesion in each being modified by the nature of the organ. The direct ætiology of hypertension is unknown.

NEUROLOGY.

(60) The Hysterical Element in Organic Nervous Affections.

A. F. Hurst (*Proc. of Roy. Soc. of Med.*, April-May, 1919) writes that the grafting of hysterical symptoms upon symptoms caused by organic disease is far commoner than is generally supposed; so speaks his experience among soldiers at the Seale Hayne Hospital during the past four years. A sufferer from disseminated sclerosis may become the subject of hysterical paraplegia, produced by his suggestible mind, and obviously the real cause of that paraplegia may be overlooked. In *tabes dorsalis* the improvement in gait following Frenkel's exercises is frequently too rapid and dramatic for any explanation, except that underlying suggestion. An experience with a case of Friedreich's ataxia is related which bears this out. The initial incapacity caused by injury and disease gives rise by autosuggestion to the idea of permanent incapacity, often aided by the unconscious hetero-suggestion of the physician, and whilst a less suggestible man might recover the use of paralysed limbs in a few days, in the suggestible man, the paralysis is perpetuated by the growth of an hysterical element, sown by suggestion and removable by psycho-therapy. The diagnosis in such instances may be extremely difficult. He quotes the case of a man with right hemiplegia and aphasia, an apparently uræmic subject, treated in a neurological hospital for a year, exhibiting classical signs, right leg and arm totally paralysed, muscles so rigid that tenotomy was performed, deep reflexes much exaggerated, ankle clonus present, tongue deviated, therefore regarded as "entirely organic," and yet rapidly cured when submitted to persuasion and re-education. Equally remarkable cures in other cases of hemiplegia and in a case of paraplegia with incontinence of urine, following spinal concussion and, in a case of hysterical blindness, grafted upon organic blindness due to an occipital wound, are recorded.

(61) Some Biological Effects of High Explosives.

Carver and Dinsley (*Brain*, Part II., 1919) maintain that there are many patients suffering from the neuroses of war in which the emotional factor does not appear to be primary and cannot be considered as causative. In such cases, therefore, a purely psychogenic explanation will not suffice. Observation reveals that "commotional" factors have been operative. They refer to three sub-groups. First, the cases of "direct concussion" produced by the impact of missiles—either fragments of shell or earth—characterized clinically by loss of consciousness, aphasia, sphincter trouble, amnesia and profound mental exhaustion. Secondly, the cases of "indirect concussion," brought about by variations in pressure accompanying the detonation, in which the clinical indications are less intense than in sub-group 1. Thirdly, there are the cases in which the ætiological factor seems to be the fine, extremely rapid vibrations, less known as products of explosions. The authors describe this factor for the first time, the issue being demoralization. As part of their investigation they conducted a series of detonation experiments upon fish and rats. From this they determined three zones: (1) the zone of *brisance*, with which this paper is not concerned; (2) the zone of "decompression"; (3) a zone in which the effects are slight and transitory. They conclude that the neuroses of war may be brought about either by the action of "purely emotional shock" or by "purely physical shock," but most commonly by a combination of these two factors (after the psycho-neurotic symptoms have been cleared up, the residual, actual neurosis, which has formed a foundation for the whole disorder, is often exposed). The object of the paper is to correct the present tendency to regard the neuroses of war as of exclusively emotional origin.

(62) Goître and the Psychoses.

Norman Routh Phillips (*Journ. Mental Science*, October, 1919, draws attention to the frequency with which goître is associated with the psychoses. On visiting the wards of the Bel Air Asylum, near Geneva, Switzerland, he was impressed by the high percentage of patients suffering from goître—36% for both sexes—and thereupon examined all patients in the St. Andrew's Hospital, Northampton, England, with the surprising result that one patient in every eight showed some thyroid enlargement. As to the mechanism of this association he points out that (*a*) goître is, at some time in the patient's history, accompanied by a condition of hypo- or hyper-thyroidism, and that (*b*) either of these conditions is capable of inducing a state of auto-intoxication with mental symptoms. His series of cases shows that the nature of the psychosis is determined, in some degree, by the form of the functional disturbance in the thyroid gland. For example, hyper-thyroidism is usually associated with states of excitement and agitation, such as maniac-depressive insanity; whereas hypo-thyroidism is more often associated with states of apathy and indifference, such as *dementia præcox*. The treatment of the psychoses associated with goître depends to some extent on the nature of the functional disturbance in the thyroid gland. If the signs point to hypo-thyroidism, treatment by thyroid extract should be instituted. If, on the other hand, hyperthyroidism is present, treatment should be directed to the removal of the mental element, which is now admitted to be of great importance in the ætiology of this condition. The only satisfactory way of accomplishing this is by the employment of psycho-therapy.

(63) Neurological Signs in Gunshot Wounds of the Scalp.

Jefferson (*Brain*, June, 1919), seeking for neurological signs and symptoms in a case-series of 54 scalp wounds treated in France, was able to establish their presence in all but five cases. He comments that the neurological signs of underlying cerebral mischief in scalp wounds have been greatly neglected. The eye has seen the scalp injury alone; the mind has travelled no further. Two types may be distinguished; those in which the changes are concussional and general and those with signs of local cerebral contusion. In most cases the symptoms are transient and not obvious, excepting when seizures of Jacksonian type arise. Further, the patients seldom connect the numbed or weak hand or the contracted visual field with the head wound. In none of this series was there fracture of the skull, yet there were eleven definite local contusions of the motor cortex, four of the visual and two more in which a motor lesion was associated with a sensory disturbance of the hand. Three patients had Jacksonian seizures and three were trephined on the neurological evidence, extradural clot being disclosed in two. In four cases there were signs of contra-lateral injury by *contre coup*. There is a moral to be drawn with respect to the assessment of pensions. While the scalp wound may have been in itself trivial, momentous cerebral injury may have been inflicted.

(64) The Cerebro-Spinal Fluid in General Paralysis.

Since the year 1913 Sicard and Roger (*Bull. et Mém. Soc. Méd. Hôp. de Paris*, XLII., 1918) have systematically examined the cerebro-spinal fluid in more than 100 cases of general paralysis, in relation to the Bordet-Wassermann reaction before and after treatment by intravenous injections of arseno-benzol. Their principal finding is that, in general paralysis, the reaction of the spinal fluid cannot be rendered negative, even after intensive treatment with arseno-benzol; whereas the reaction of the blood, on the contrary, often becomes negative under such treatment. They also declare that a suspect, showing a negative reaction of the cerebro-spinal fluid in three successive examinations, several days intervening between each examination, may be regarded as free from general paralysis. In addition they remark that in general paralytics lumbar puncture is born with impunity, accordingly there is no necessity to order the customary period of rest in the horizontal position by way of after-treatment. Therefore, tolerance of lumbar puncture may be added to the clinical signs of this disease.

British Medical Association News.

MEDICO-POLITICAL.

Meeting of the Federal Committee.

The Federal Committee of the British Medical Association in Australia met at the B.M.A. Building, 30-34 Elizabeth Street, Sydney, on February 4 and 5, 1920. The following representatives were present: New South Wales Branch, Dr. R. H. Todd, Dr. F. P. Sandes; Queensland Branch, Dr. W. N. Robertson, Dr. J. Lockhart Gibson; South Australian Branch, Dr. W. T. Hayward, Dr. F. S. Hone; Victorian Branch, Mr. G. A. Syme, Dr. R. H. J. Fetherston.

Apologies for non-attendance were received from Dr. W. W. Giblin, C.B., V.D., and Dr. E. Brettingham Moore, the representatives of the Tasmanian Branch, who had been prevented from travelling by the disturbed conditions of the shipping arrangements, and also from Dr. W. P. Seed (Western Australian Branch).

Dr. W. T. Hayward was appointed Chairman, Mr. G. A. Syme Vice-Chairman, Dr. R. H. Todd Honorary Secretary and Treasurer and Dr. W. H. Crago Honorary Auditor.

Dr. Hayward expressed the thanks of the Committee to Dr. F. P. Sandes for having carried out the work of Honorary Secretary during the past twelve months.

Financial Statement.

Dr. F. P. Sandes, in his capacity as Honorary Treasurer, presented the financial statement and balance sheet for the six months ended December 31, 1919.

Correspondence.

Letters were read from Sir Joseph Verco, Sir Charles Ryan and Sir Henry Maudsley, thanking the Committee for their congratulations on having received the honour of knighthood.

A letter was also read from the Federal Quarantine Bureau, dealing with the measures that were being adopted to prevent the spread of malaria in Australia (see *The Medical Journal of Australia*, January 17, 1920, page 68).

Travelling Expenses of Members.

The Committee resumed the consideration of the question raised at the last meeting, of whether the constitution of the Federal Committee should be modified to enable it to pay the travelling expenses of members attending the meetings. A tabulated statement of the expenses involved was presented. It was resolved that steps be taken with the view of the constitution being altered so that the Committee might be enabled to pay the travelling expenses of its members.

Extension of the Public Health Services.

On the motion of Dr. R. H. Todd, seconded by Mr. G. A. Syme, it was resolved:—

> That the consideration of the subject of curative medicine in connexion with the extension of the public health services stand over.

Some correspondence was read from the Victorian Branch, referring to the creation of machinery for carrying into effect the proposals of the Federal Committee, which had been adopted at its meeting of July 29, 1919 (see *The Medical Journal of Australia*, August 9, 1919, pages 118-120). Mr. G. A. Syme explained that the resolutions of the Federal Committee had been presented to the Acting Prime Minister, the Honourable E. D. Millen, on July 31, 1919, by a deputation consisting of Dr. W. T. Hayward, the Chairman, Dr. R. H. J. Fetherston and himself, together with Dr. J. H. L. Cumpston. It was obvious from the policy speech of the Prime Minister, delivered at Bendigo on October 30, 1919, that it was his intention to give effect to the recommendations of the Federal Committee (see *The Medical Journal of Australia*, November 8, 1919, page 409). The Victorian Branch had given further consideration to the whole subject and had formulated a number of additional proposals. The meeting had before it a document with seven clauses, embodying the views of the Victorian Branch.

Dr. R. H. Todd moved and Dr. F. P. Sandes seconded that the first clause be adopted. This was approved (see below).

The second clause was also adopted.

In connexion with the third clause, a short discussion took place, in the course of which certain alleged disadvantages attaching to the distribution of the maternity bonus by the Federal Government were discussed. The clause was adopted unamended.

Clause 4 was adopted without discussion. Clause 5 read as follows:—

> That, in order to give full recognition to the national value of public health and to insure a progressive policy in accord with modern knowledge, it is highly desirable that a full Commonwealth department of public health be created, with a professional permanent head and under the control of a minister for public health without other portfolio. The Federal Committee suggests that the importance of preventive medicine warrants the creation of such a ministry of health.

Dr. J. Lockhart Gibson hoped that the Committee would modify the proposal to recommend that the department should be conducted without political control. It was possible to set up a commission which would be permanent and which would not be subject to the varying moods of party politics. At the present time in Queensland public health was administered by the Chief Secretary, who was a politician and not a hygienist.

Some members raised the question of the practicability of the emancipation of public health from political control. It was pointed out that in New South Wales there were a number of public services conducted by commissions in the manner suggested by Dr. Gibson. The suggestion had been made in New South Wales to place the hospitals under a commission.

In regard to the extent of the public health activities of the Federal Government, which were limited to the Quarantine Service, it was pointed out by Dr. Robertson that these limitations would not apply to Federal territory nor to the Pacific Islands over which Australia held a mandate.

Dr. Sandes moved that the words "and in view of the Australian mandate over the Pacific Islands" be inserted after the words "national value of public health." The amendment was carried and the clause, as amended, was adopted (see below).

Clause 6 was adopted, including paragraphs (*a*) and (*b*).

Dr. F. P. Sandes called attention to the increasing recognition of the value of preventive medicine to the community. It had been suggested that chairs of preventive medicine should be established in the universities. This proposal had received favourable consideration by the Faculty of Medicine of the University of Sydney. The establishment of such chairs might be delayed for considerable periods unless financial support from the Federal Government was forthcoming. He therefore moved that a paragraph (*c*) be added in the following terms:—

> Endowing chairs of preventive medicine in the several State universities.

The motion was carried.

On the motion that clause 7 be adopted, Dr. J. Lockhart Gibson pointed out that some verbal amendments were necessary to remove the impression that a diagnosis was made in a laboratory. He held very strongly that the diagnosis of disease could only be made at the bedside and that the report from the bacteriologist or chemist in the laboratory was but one factor contributing to the diagnosis. Mr. Syme stated that he accepted the verbal amendments proposed, but he pointed out that it was essential that the laboratories established for this purpose should not be utilized for ordinary clinical pathology. The clause, as amended, was carried.

A few verbal amendments were accepted in the final paragraphs and the whole document, as amended, was adopted on the motion of Dr. R. H. Todd, seconded by Mr. G. A. Syme. The amended document is as follows:—

> 1. That the Commonwealth Government, in giving effect to the declared policy, could most advantageously approach its purpose through the avenues of local investigation and research, with local campaigns to demonstrate the efficiency of modern methods of preventive medicine.
>
> 2. That local campaigns of control of infectious diseases in association with existing State health machinery should be undertaken with the object of elucidating the

principal factors concerned in the spread of such diseases as diphtheria, typhoid, tuberculosis in Australia, and with the object further of arresting their spread wherever possible by the application of known or ascertained methods of control, extending the principle now in operation in connexion with hookworm eradication in Australia.

3. That the Commonwealth should extend the present practice of subsidizing venereal diseases control and subsidize also State expenditure on infant welfare work and State expenditure on maternity hospitals and maternity wards.

4. That the Commonwealth should undertake the systematic investigation into the causation of infant deaths during the first month of life.

5. That, in order to give full recognition to the national value of public health and in view of the Australian mandate over the Pacific Islands and to insure a progressive policy in accord with modern knowledge, it is highly desirable that a Commonwealth Department of Public Health be created, with a professional permanent head, under the control of a minister for public health without other portfolio. The Federal Committee suggests that the importance of preventive medicine warrants the creation of such a ministry of health.

6. That, inasmuch as the functions of the general medical profession, as enumerated in the resolutions of the Federal Committee of the British Medical Association—submitted to the Acting Prime Minister in July last—cannot be brought into full operation without legislation, a commencement be made by—

(*a*) The creation of an advisory council of members of the medical profession outside of the public service, who shall confer with the permanent head of the Department of Public Health on matters of policy in relation to the prevention of disease.

(*b*) Enlisting, whenever opportunity offers, the assistance of local medical practitioners in the conduct of local campaigns of prevention of disease.

(*c*) Endowing chairs of preventive medicine in the several State universities.

7. That, in order to insure successful development of the policy of Commonwealth co-operation with the State Governments for the furtherance of public health, it is desirable that—

(*a*) A central establishment for investigation of preventible diseases, working in association with existing institutions in each State and branch establishments for research at such necessary places as are without State establishments be instituted.

(*b*) Laboratories should be provided at all principal ports and at other centres, with adequate facilities for the examination of all specimens sent by medical practitioners in the surrounding districts, especially for assisting the diagnosis in cases of quarantinable diseases such as cholera and plague. By arrangement with State Governments a great amount of valuable work could be done by these laboratories in connexion with the administration of State Health Acts.

(*c*) The Public Health Department should have a medical staff specially trained in field research and laboratory research.

This policy is similar with that which has been followed in the United States, where the Federal Health Department has consistently pursued the policy of working in conjunction with the State Health Departments.

The Federal Committee urges upon the Prime Minister that progressive work in the domain of preventive medicine can only be expected when the salaries offered are such as to offer the prospect of a satisfactory career to the better class of young medical graduates; the present rates of salary are too low.

It was resolved that this document be forwarded to the Prime Minister, with a covering letter explaining its significance.

Medical Officers' Relief Fund.

The Honorary Secretary pointed out that at the last meeting of the Federal Committee the Trustees were asked to have a deed of trust drawn up, setting forth the nature of the Fund and including a clause giving the Trustees power to utilize the residual fund for the purposes of medical benevolence. The Trustees had been requested to carry this out and a solicitor had been instructed to prepare a deed of trust. Dr. Todd explained that the deed had been drafted with care. It was determined that the deed be executed in duplicate, one copy to be kept by the Federal Committee and the other by the Trustees.

A statement was presented, setting forth the sums paid and promised up to February 4, 1920, aggregating £11,456 12s. 10d., and the disbursements, aggregating £899 15s. 11d..

Post-Graduate Training.

The Honorary Secretary gave an account of the steps that had been taken to bring to the notice of the Minister of Defence the views of the Federal Committee concerning the fulfilment of the promise of facilities in Australia for post-graduate training which had been given to naval and military medical officers before leaving England. It seemed that the Department had found itself unable to provide opportunities for any post-graduate training, except in the case of those who re-enlisted for home service.

Medical Treatment of Discharged Soldiers.

The Honorary Secretary reported that the proposal for the modification of the conditions governing attendance on returned soldiers, embodied in a document known as Circular "L" of the Department of Repatriation, had been forwarded to the Comptroller (see *The Medical Journal of Australia*, August 16, 1919, page 141).

The matter had been referred to the Medical Advisory Committee of the Department. This Committee had drawn up recommendations to the following effect: In the first place, the fees for a first consultation, examination and treatment should be 10s., while the fees for the next three consultations should be 7s. 6d. and the fees for subsequent consultations should be 5s., provided that the patient visited the local medical officer's surgery. When the local medical officer visited the patient in his home or elsewhere, the fee for the first visit should be 10s. and for subsequent visits 7s. 6d.. The Advisory Committee defined the term "examination" to cover examinations for treatment or in respect of applications for vocational training or assistance. The term "first visit" or "first consultation" was to signify the first visit or consultation in any twelve months. The Advisory Committee suggested that a progress report should be forwarded for the information of the Deputy Comptroller after the tenth consultation or visit. The following paragraph was included:—

> Where the local medical officers require the patient's mixture to be repeated, the number of repeats should be shown on the prescription form, so that the necessity for the patient to visit the local medical officer for such repeats, with the consequent payment for each visit by the Department, may be eliminated.

The Advisory Board recommended that an allowance of 5s. per mile beyond three miles from the local medical officer's surgery should be granted for the day-time and that an allowance of 7s. 6d. per mile be granted between the hours of 8 p.m. and 8 a.m..

The modified scale of fees set forth in the report of the Advisory Committee had been forwarded to the several Branches. The Queensland Branch, the Western Australian Branch and the Tasmanian Branch had signified their acceptance of the proposals. Dr. R. H. Todd reported that the members of the New South Wales Branch had been advised to carry out the work under tentative arrangements and to refuse to make any permanent arrangements for the present.

It was resolved:—

> That the Department be written to, advising that the Federal Committee, as representing the Branches of the British Medical Association in Australia, approves of the amended scale of fees and conditions as passed by the Advisory Committee of the Department and urging that they be accepted as the regulations governing the payment and conditions of service for the medical officers of local repatriation committees.

Assistance to Returned Medical Officers.

A communication from the Western Australian Branch, dealing with the assistance accorded to returned medical officers by the Repatriation Department, was read. It was

pointed out that, according to the regulations issued under the *Australian Soldiers' Repatriation Act, 1917-1918*, the maximum amount that could be placed at the disposal of a returned soldier, either by way of loan or as a gift, was £335. A medical practitioner would need between £1,000 and £2,000 to establish himself in practice. A loan not exceeding £700 could be obtained for the purpose of purchasing a home, including the land. The Western Australian Branch considered that a special scale of advances should be given to doctors.

Dr. R. H. Todd explained the position in regard to the repatriation assistance of medical officers in New South Wales. It was understood that recently the policy of the Department had been changed, with the result that no assistance of any kind was given, except in the case of a few juniors who had not been in practice before enlistment. These few men were entitled to the £10 gift and the £40 loan for equipment under Rule 75.

He therefore moved:—

That the following propositions be approved, namely:

(1) That the principle underlying the claim of doctors to be assisted by the Repatriation Department (and the same applies to "widows" and "dependants") is that no distinction should be made in the treatment accorded by the Department as compared with other classes of the community.

(2) That the provisions of the statutory rule under the *Australian Soldiers' Repatriation Act, 1917-1918*, in respect of "furniture, equipment, businesses," namely, Part IX. of the 1919 regulations, Rules 73-78, or any amendment thereof, should be interpreted as applying to doctors as to others.

Dr. W. N. Robertson seconded the motion, which was carried, and it was decided that a letter embodying the resolution and explaining the situation be addressed to the Repatriation Department.

Repatriation of Dr. Eugene Hirschfeld.

The Honorary Secretary read a letter from the Queensland Branch, asking for the support of the Federal Committee in connexion with its endeavour to secure the deportation of Dr. Eugene Hirschfeld, the ex-German Consul of Queensland. A short account of the action taken by the Branch was recited (see *The Medical Journal of Australia*, November 22, 1919, page 443, and February 7, 1920, page 124). It was pointed out that the name of Dr. Eugene Hirschfeld had been removed from the medical register of Queensland. He had been interned during the war and the Queensland Branch were satisfied that the authorities had had sufficient reason for taking this course. In these circumstances it was felt that his continued presence in the Commonwealth was not in the interests of the community.

In regard to the New South Wales medical men who had been interned, it was understood that a letter had recently been received from the Department to the following effect: Dr. Max Herz was awaiting repatriation; Dr. George Baur had been released "several years ago"; Dr. Friedrich Wilhelm Finselbach was on parole pending a settlement of his case and Dr. Edgar Ferdinand Setzke had already been repatriated to Germany at his own request.

It was moved by Mr. G. A. Syme, seconded by Dr. R. H. J. Fetherston, and resolved:—

That the Federal Government be asked to deport all medical practitioners of enemy origin who have been interned during the war.

The History of the Australian Medical Services in the War.

The Honorary Secretary gave a short account of the action taken by the Department of Defence in regard to the publication of a war history of the Australian medical services. A letter had been addressed to the Chairman of the Federal Committee by the Secretary of the Department, calling attention to the desire on the part of each of the great civil professions to have a permanent record of its share in the war. The Government had decided to afford the opportunity for the publication of a comprehensive popular history of the medical services. The Government therefore asked the medical profession, through the Federal Committee of the British Medical Association, if its members desired a record to be written. It was suggested that a small committee should be formed to represent the medical profession in the dealings with the Government concerning the history and that the Committee should ascertain through the existing organizations of the medical profession in Australia the number of members who would pledge themselves to the Committee to purchase copies of the work when finished. A subsequent letter had been addressed by the Defence Department to the several Branches of the British Medical Association, modifying the original proposal by suggesting that the history should be a detailed record of the problems of the Australian Naval and Military Medical Services during the war, of the manner in which these problems had been met and solved and of the medical military experiences of the services. Appended to this letter was a memorandum drawn up by the official historian, Mr. Charles Bean, and a synopsis prepared by Mr. Bean, in association with Colonel Butler, which might serve as a basis for the work.

It was moved by Dr. R. H. Todd and seconded by Dr. W. N. Robertson:—

That the Federal Committee is in favour of the publication of a book such as is described in the letter of the Department of Defence addressed to the Branches of January 28, 1920.

The motion was carried unanimously.

A communication was received from the Australasian Medical Publishing Company, Limited, stating that it was willing to undertake the publication of the work.

It was moved by Dr. R. H. Todd and seconded by Dr. J. Lockhart Gibson:—

That the offer of the Australasian Medical Publishing Company, Limited, as set out in the following resolution of the company, be accepted:—

That the Federal Committee be advised that the Australasian Medical Publishing Company, Limited, is willing to undertake the publication, provided the Federal Committee approved of the production of the work, subject to the company being able to make suitable arrangements with the Federal Government.

The motion was carried.

Dr. F. S. Hone suggested that the Federal Committee should commend the matter to the favourable notice of the Branches.

Australasian Medical Congress.

A proposal from the New South Wales Branch, dealing with the steps to be taken in the event of a winding up of the Australasian Medical Congress, was received.

The Honorary Secretary advised that the proposal had been submitted to the several Branches for consideration. Replies had been received from the Victorian Branch, the Queensland Branch, the South Australian Branch and the Western Australian Branch. Reference was made to the discussion on the subject of the future of the medical congresses in Australia at the meeting of the Federal Committee in July, 1919 (see *The Medical Journal of Australia*, August 16, 1919, page 141).

It was resolved, on the motion of Dr. Sandes, seconded by Dr. Robertson:—

That steps be taken by the Federal Committee to organize British Medical Association medical congresses, to come into operation upon the winding up of the Australasian Medical Congress, such congresses to be undertaken by the Federal Committee on behalf of the Branches in Australia collectively, the New Zealand Branch being invited to co-operate.

It was further resolved that this resolution should be conveyed to the Australasian Medical Congress and also to the New Zealand Branch.

The Importation of Bacteriological Products and Sera.

The Honorary Secretary reported that a resolution to the following effect had been passed by the New South Wales Branch and had been submitted to the Federal Committee for consideration:—

(*a*) That a monopoly of any material necessary for conserving the public health is undesirable.

(*b*) That it is not yet definitely proved that the products of the Commonwealth Serum Laboratories are sufficient to meet the many and constantly varying requirements of the community for the treatment and prevention of disease.

The matter had been discussed at a meeting of the New South Wales Branch (see *The Medical Journal of Australia*, November 22, 1919, page 440, December 13, 1919, page 516,

and December 27, 1919, page 555). It had been considered by the Queensland Branch and the members had approved of the resolution of the New South Wales Branch. Mr. Syme reported that the Victorian Branch also supported the action of the New South Wales Branch to secure the withdrawal of the prohibition. Dr. F. S. Hone reported that the South Australian Branch approved of this action. It was explained that the inclusion of bacteriological products and sera in the list of substances which could not be imported except under licence, was due to the desire of the Department of Trade and Customs to prevent "dumping," pending the revision of the tariff. On the other hand, it was pointed out that the majority of these products were perishable and therefore could not be imported in large quantities in anticipation of an increased duty. The Committee considered that the Government should not place any restrictions on substances used in the treatment and prevention of disease. The action of the New South Wales Branch was endorsed and it was resolved that representations be made to the Minister, urging him to remove bacteriological products and sera from the list of prohibited substances mentioned in the proclamation of November 3, 1919.

Congratulations and Votes of Thanks.

It was resolved to send the congratulations of the Federal Committee to Dr. E. C. G. Page, on his election to the House of Representatives.

A vote of thanks was passed to the New South Wales Branch for providing accommodation for the meeting of the Committee and for the hospitality extended to its members by the Council of the Branch.

A vote of thanks was also passed to Dr. W. T. Hayward for presiding at the meeting.

Next Meeting of the Federal Committee.

It was determined that the Federal Committee should hold its next meeting at Brisbane in August and that the exact date be fixed by the Chairman.

DINNER TO THE MEMBERS OF THE FEDERAL COMMITTEE.

The President and Council of the New South Wales Branch of the British Medical Association entertained at dinner on February 4, 1920, the members of the Federal Committee, Dr. W. T. Hayward, Chairman; Mr. G. A. Syme, Vice-Chairman; Dr. W. N. Robertson, Dr. J. Lockhart Gibson, Dr. F. S. Hone and Dr. R. H. J. Fetherston. Included among the guests were the Directors of the Australasian Medical Publishing Company, the members of the Council who had returned from active service and some past members of the Council. The Council had addressed an invitation to General Sir Neville Howse, V.C., K.C.B., K.C.M.G.. The invitation, however, had failed to reach Sir Neville, who was on official business in Melbourne. The toast of the members of the Federal Committee was entrusted to Dr. David Thomas, who eulogized the accomplishments of the several members and expressed the hope that it would be the zenith of ambition of every active member of the British Medical Association in the Commonwealth to be selected by his colleagues to represent his Branch on the Federal Committee. Dr. Hayward, in responding to the toast, dealt with the position of the British Medical Association and the activity of the Federal Committee and touched on the subject of the Australasian Medical Congress. Mr. G. A. Syme entertained his audience with anecdotes, after having announced that he was incapable of being anything but serious.

Dr. C. Bickerton Blackburn proposed the health of the Directors of the Australian Medical Publishing Company. He spoke of the importance of the work of the Directors in controlling the production and management of *The Medical Journal of Australia*. Dr. W. H. Crago, Dr. W. N. Robertson and Dr. F. S. Hone responded.

Dr. F. P. Sandes, in a graceful speech, asked those present to join him in drinking to the health of their comrades who had returned from active service. Naming each one in turn, he recited episodes from his own experience to illustrate the characteristics of the men he wished to honour. The speeches in reply were brief, but full of reminiscence and of cordial feeling. They were delivered by Dr. R. J. Millard, Dr. J. Adam Dick, Dr. Clarence Read, Dr. Archie Aspinall, Dr. Sydney Jamieson, Dr. R. Gordon Craig and Dr. C. B. Blackburn. At a late hour Dr. W. H. Crago proposed the health of Dr. R. H. Todd, a toast that was drunk with enthusiasm.

The undermentioned have been nominated for election as members of the New South Wales Branch:—

John Cappie Shand, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Walgett.

Herbert O. Maher, Esq., M.B., Ch.M., 1915 (Univ. Sydney), c/o. Perpetual Trustee Company, Limited, Hunter Street, Sydney.

Robert Maxwell McMaster, Esq., M.B., Ch.M., 1915 (Univ. Sydney), Goulburn.

J. J. Campbell Lamrock, Esq., M.B., Ch.M., 1916 (Univ. Sydney), Bellevue Hill, Edgecliff.

GIRL AND BOY WELFARE CONFERENCE, PERTH, WESTERN AUSTRALIA.

A Criticism.

By **Roberta H. M. Jull, M.B., C.M.,**
Medical Officer of Schools of Perth, Western Australia.

The Girl and Boy Welfare Conference held in Perth during November, 1919, was the third initiated by the Child Welfare Bureau of Western Australia. The objects, as stated on the pamphlets issued to delegates and the public generally, were: (1) to consider the best methods of awakening and training the capacities of the child; (2) to create a deeper interest in this State in the vital question of child welfare. The first of these objects was so liberally interpreted that an altogether too wide field was presented for the consideration of those who attended the meetings. The second objective was fortunately attained, in a great measure. Many more societies sent delegates than on former occasions and the accommodation of the Town Hall, where the Conference was held and where there is sitting accommodating for about one thousand persons, was taxed to its utmost for the evening lectures.

It was claimed by the promoters of the Conference that some eighty-seven societies were represented. It is noticeable in the printed list that the names of delegates are often omitted. Were delegates appointed and, if so, did they attend? It semed doubtful, as the average attendance at the afternoon sessions was about thirty-five—a somewhat poor record.

The first session (November 11, 1919) began with a short speech by the Governor, Sir William Ellison-Macartney, on the need for such a conference. The Chancellor of the University, Archbishop Riley, followed with an address on "The Influence of the University on the Young Life of the State." It set forth the view that opportunities for learning should be open to all who desired them and showed that the foundation of the University was the result of the widely-felt need of such a crown to the system of education which obtains in the State, beginning with compulsory primary education. The Archbishop dwelt on the necessity for carrying this education as far as possible into adult life.

The evening session was addressed by Dr. Dakin, Professor of Biology, University of Western Australia, on "The Practical Teaching of Sex Hygiene." Lantern slides and specimens were used to demonstrate how this teaching could be given in schools by teachers and in the home by parents, from early childhood, if the biological method were used, and adapted to the understanding of the particular age or grade of those taught. The address made a very favourable impression on the audience.

On November 12 Miss Stoneman, M.A., who has studied under Professor Terman at Stanford University, California, spoke on "Modern Methods of Training the Socially Inefficient." She recounted some of the work done in America in this connexion. This address was followed by one on "A Modern Children's Court," by Albany Bell, Esq., J.P., who does much of the Children's Court work in Perth.

The evening session was occupied by a paper on "Playgrounds and Open Spaces in the City," by Mr. W. Saw. It

was followed by a discussion on "The Best Practical Means of Formulating a Scheme for Better Recreational Environment in the City."

On November 13 the head mistress (Miss Priest) of one of the best infants' schools in the metropolitan district spoke on "The Child and the New Age." She pleaded for greater opportunities for individual development in school life, less of a "system" to which all types must conform. The address was on the lines of Holmes's book, "What Is and What Might Be," and was suggestive in many ways. There is, however, always a difficulty in dealing with school work, in the fact that, where money is an important item, it is not feasible to provide large enough staffs of teachers to make individual teaching possible. There is the further difficulty that many teachers are not sufficiently interested in their work, perhaps have not themselves enough individuality, to guide such a method wisely. In teaching, as in all else, there is no doubt an average to which probably 65% to 70% of the taught conform; it is therefore really the 15% above and below this average which need special treatment.

The Honourable J. E. Dodd, M.L.C., next read a paper on "The Girl and Boy in the Labour Market," in which he showed that, in spite of our much improved legislation dealing with the employment of children, a great deal remains to be done.

The evening session was occupied by the first of three lectures by Dr. Berry, Professor of Anatomy of the Melbourne University, on "Brain as the Physical Organ of Mind."

On November 14 there was an address on "School Children and Street Trading," by Cecil Andrews, M.A., Director of Education, in the afternoon.

During the evening Professor Berry lectured on "Brain Growth, Mental Development and Education."

On November 17 the only meeting was held in the evening, when Professor Berry lectured on "Social Derelicts and National Efficiency."

The Conference then adjourned till November 21, when Dr. Truby King spoke to a large audience on the rearing of infants and the incomparable advantages of maternal feeding in the prevention of infant mortality and the rearing of a healthy race.

This brief summary of the work of the Conference, which was finalized by the drawing up of a long list of resolutions, many of which are to be laid before the State Cabinet later in the form of requests, proves the contention, previously made, that an altogether too diversive programme was attempted. "The wood was lost in the trees," with one notable exception—Professor Berry's lectures. It is true that the subjects dealt with have a very definite relation to one another, but each in itself was worth threshing out thoroughly. As this was not done, it would have been wise if, at the end of the Conference, the President or someone else had gathered into a coherent whole the phases touched upon and had indicated their points of contact in the life of the community and particularly of the boys and girls on whose behalf the Conference was held. The one valuable exception before referred to was the definite gain from Professor Berry's lectures. These were a delight to all students of medicine or science who heard them and to many who had had no training as students. They were models of lucidity, delivered easily and rapidly; the listeners were carried on step by step into a growing realization of the existence in their midst of the continually accumulating menace of feeble-mindedness in its varying degrees. The possibility of detecting this condition and the need for the segregation and special training of its unfortunate victims were clearly stated and the warning was given that immediate action was necessary if Australia was to hold her own in the world. The use of numerous slides to enforce the facts set forth was most helpful, but, in spite of them, it was necessary to pay close attention to the subject matter, for, although simply expressed, the lectures were so full of ideas as to make a considerable mental effort necessary to grasp them. Some complaints on this score were made by a number of the general public, who were unaccustomed to listening to lectures, but, on the whole, the greater part of what was said was understood, while the very excellent reports printed in the daily papers were widely read and had an educational and enlightening influence hardly to be overestimated.

A concrete result, in the form of an institute for the study of feeble-mindedness and the training of experts in its detection and treatment, bids fair to result. A deputation from the Conference, with Professor Berry as chief spokesman, obtained a promise from the State Government of a grant of £2,000 a year for ten years towards the endowment of such an institute, provided the other States of the Commonwealth will each grant an equal sum. It is earnestly to be hoped this most essential school will shortly be established and that the need for such which has been so ably set forth from time to time in *The Medical Journal of Australia*, will at last be met.

As to whether the views held by Professor Berry on the value of head measurements as an indication of mental capacity are correct, continued research alone can decide. Meantime, they would be a boon as a method of rapidly grading the children in our schools into average, above average and below average. By their use it would be possible so to grade even a large number of children very quickly. No "mass tests" for children have yet been devised on the lines of those used for the adults of America's conscript army; it is therefore necessary to use the Binet-Simon's or Porteus's tests, which take a long time, as they are absolutely individual in their application. Were the Berry tests first used, only the doubtful cases would require individual tests; and such others as, from time to time, were presented by their teachers; probably a considerable amount of friction between parents and teachers and inspectors and teachers would thus be avoided and the children, as well as the community as a whole, be the gainers.

Other points brought out by these lectures and by several of the addresses given throughout the Conference were, first, the need of a greater sense of (*a*) parental responsibility and (*b*) community responsibility. The feeble-minded parent has the neglected, dirty, truant, often delinquent child. This child is taken from school at the earliest possible moment and until that time is often employed before and after school hours on casual "jobs." It becomes a street trader, drifts into casual, unskilled labour and often ends as the criminal or the prostitute. It is the duty of the community to prevent this by all means in its power, including special vocational training, and in suitable cases segregation. This may be an expensive programme at first, but it is far cheaper in the end than our present drifting policy of do nothing, or a patch here and there.

The second point which emerged was the necessity for raising the age of compulsory school attendance from fourteen to sixteen and of adjusting our social and industrial conditions to make this possible. The periods of brain growth and brain rest, as given by Professor Berry, are interesting in this connexion. He argued that between twelve and fourteen comparatively little growth occurs; after that, for a period of four or five years, growth again takes place to an appreciable extent in the reasoning supragranular layer. At present the majority of children leave school after the brain rest period and enter very often an occupation which calls for little or no mental effort. Thus the brain of the manual worker tends to remain stationary or but little exercised, while that of the high school and university student goes on growing and developing until nineteen or twenty years of age. This must be to the disadvantage of the race, as well as of the individual. We must somehow find the money and time to keep our children at school longer; if they cannot all do so for five days a week, a beginning might be made by several hours each week being arranged, preferably in the morning, before fatigue sets in. There was a consensus of opinion among the delegates that night schools and night drills are bad for both teachers and scholars physically and mentally and, in many cases, morally also.

In conclusion, it can happily be said that there is no doubt the conference did good and aroused much more interest than the two held previously; the Executive are to be heartily congratulated. It was, however, hardly a conference in the true sense. The discussions, for the most part, were undeserving of the name; the same delegates spoke over and over again; the large majority did not say a word, while any real debate on the questions raised was entirely absent.

The following points suggest themselves. It would be wise to choose one subject for each Conference, or, at most, two which are closely related. This should be done about

six months before the date of meeting. Each society should then be asked to choose its delegates, who would be expected to familiarize themselves with the subject chosen and to be prepared to make some contribution, however small, to the general fund, by speaking in Conference. The chief papers should be read by people who had some claim to be expert in their subject and, if possible, at least one short debate might be arranged for between well-known speakers. To give an illustration, the past Conference could very usefully have devoted all its time to studying mental deficiency and methods of dealing with it. Professor Berry's lectures should still have been the main feature. Subsidiary ones might have been (1) a short history of the work done by Binet, Simon and others during the last fifty years in Europe and America in connexion with mental tests, (2) vocational training, (3) segregation, (4) the evil results of the neglect of the feeble-minded. By some such method a definite educational value would attach to the work of each Conference, the people of the State would be really enlightened and so be prepared to act upon any reasonable suggestions put forward. Every conference would in this way mark a definite advance along some avenue of progress. Under the present system, by which a subject is touched upon and left behind for another, there is a sense of many good beginnings but little or no progress.

It would also be well to limit each conference to three days, or perhaps four. This is quite long enough to expect busy people, as most delegates are, to give to the work; yet it gives time for thorough discussion and is not so long that interest will die down.

If at such a conference, at all conferences, in fact, it could be arranged that the names and work of delegates were announced by the Secretary or Chairman when they rose to speak, the interest would be much heightened. Even in a small community, everyone does not know his neighbour by sight and there is no doubt that the value of opinions expressed is often enhanced by the knowledge that the speaker has earned the right to an opinion by work done. This would be an innovation and, on that account, would probably arouse opposition at first; it is offered for what it is worth.

Several months ago Colonel Eric Sinclair, the Principal Medical Officer of the 2nd Military District, intimated to the authorities that he would be unable to continue in office after the end of 1919. Colonel William L'Estrange Eames, C.B., C.B.E., was appointed to the position and took over the duties during the first week in February, 1920.

Correspondence.

EXCISION OF URETHRAL STRICTURE.

Sir,—I have read with great interest Dr. Harry Harris's paper on excision of urethral stricture in your issue of January 31, 1920, and with something more than interest the debate upon it, with the evidences of personal kindliness towards myself manifested by some of the speakers.

I am, however, a little perplexed by Dr. Harris's view as to the value of preliminary supra-pubic drainage of the bladder. I note that in his reply he "referred to the fact that Mr. Hamilton Russell carried out some of his operations without a supra-pubic cystotomy." Let me say at once that in none of my cases has a preliminary cystotomy been done. The case of the stricture operation is not on "all fours," with the case of supra-pubic prostatectomy. In this latter operation a large cavity is created, filled with blood-clot and very imperfectly drained, and it may well be considered advisable to cleanse the bladder and purify the urine as a preliminary measure. The sole reason, however, for doing this is to be found in the fact that the operation is to be a supra-pubic one and not a perineal one. When the perineal route is chosen for prostatectomy, as has been clearly shown by H. H. Young, preliminay drainage of the bladder is certainly not required, for the perineal operation affords drainage to both the bladder and the cavity of the prostatic capsule simultaneously in the most efficient way possible. The bladder is better drained through the perineum than through a supra-pubic opening and I am quite sure that Dr. Harris will find that his fears as to the evil effects of a momentary contamination of the field of operation by putrid urine are groundless; both the bladder and the perineal wound are perfectly drained by the rubber catheter introduced into the bladder through the perineum. The urine passes through the lumen of the catheter and the fluids of the wound escape by the side of it. It is not a small matter to subject a patient to two operations where one can be made to answer quite well.

It is true again that to be able to pass an instrument from the bladder to the perineum during the operation facilitates the operator's task; but it will rarely be found that the difficulties are so great as to oblige him to open the bladder for this purpose. I have never found it necessary to do so yet; but I am inclined to think that in a case of traumatic stricture in the region of the triangular ligament (uro-genital diaphragm) it may be a wise and necessary step. In the only case of traumatic stricture that I have operated upon (an account of which is given in my series published in your issue of March 22, 1918), I do not think I could have carried out the operation successfully without the aid derived in this way from the supra-pubic opening which was already present.

Yours, etc.,
R. HAMILTON RUSSELL.

Melbourne, February 5, 1920.

TUBERCULIN.

Sir,—In *The Medical Journal of Australia* for February 7, 1920, Dr. Spring discusses the administration of tuberculin. The only short answer that can be given to the question "how best to use tuberculin?" is the same as that to the question how to make a century at cricket or at billiards, *viz.*, "Study the teachings of experts, practise their methods and, if possible, watch their procedure in individual cases."

A full reply requires a lengthy treatise; a few general principles may, however, be shortly stated: (*i.*) Tuberculin is specific; it is useless for other diseases, *e.g.*, secondary pyogenic infections. (*ii.*) The benefit from small doses is usually short-lived. (*iii.*) Slight reactions do good. (*iv.*) To repeat small doses increases the patient's sensitiveness. (*v.*) To increase the dose lessens the sensitiveness. (*vi.*) There is no universal optimum dose; the best dose is that which will produce a slight reaction, usually ¼ to ½ more than the last dose. (*vii.*) Three or four days is commonly the best interval, except for very large doses and after reactions. (*viii.*) Different kinds of tuberculin are required in different circumstances.

A suitable initial dose of T.R. for an adult with subacute disease and fair general health is about 0.0002 c.cm.. The maximum dose of T.R. is much larger than that Dr. Spring mentions; thus:—

(*a*) On April 25, 1907, I watched Dr. Camac Wilkinson give one thousand nine hundred milligrams of T.R. (1.9 c.cm.) to a tubercular woman weighing 56 kilograms (she had, of course, been immunized by previous adequate doses); there followed a slight reaction to 38° C..

(*b*) On July 25, 1907, he gave two thousand mg. (2 c.cm.) of T.R. to a man who weighed 70.5 kilograms and had tubercle bacilli in his sputum; there was no reaction.

Both these persons were strong and well in January, 1920, nearly 13 years later.

Yours, etc.,
F. GUY GRIFFITHS, M.D.

171 Macquarie Street, Sydney,
February 7, 1920.

Books Received.

DISEASES OF THE NOSE AND THROAT, Fourth Edition, by Herbert Tilley, B.S., F.R.C.S.; 1919. London: H. K. Lewis & Company, Limited: Demy 8vo., pp. 844, with 74 plates and numerous text illustrations. Price, 25s. net.

A DICTIONARY OF TREATMENT, INCLUDING MEDICAL AND SURGICAL THERAPEUTICS, Sixth Edition, by Sir William Whitla, M.D., LL.D.; 1920. London: Baillière, Tindall & Cox; Demy 8vo., pp. 1,083. Price, 25s. net.

THE GREAT WAR AND THE R.A.M.C., by Bt. Lieutenant-Colonel F. S. Brereton, R.A.M.C.; 1919. London: Constable & Company, Limited. Sydney: Angus & Robertson, Ltd.; pp. 300, with 9 maps, 1 plan and 2 appendices. Price, 16s.

PHYSIOLOGICAL PRINCIPLES IN TREATMENT, Fourth Edition, by W. Langdon Brown, M.D., F.R.C.P.; 1919. Baillière, Tindall & Cox; Crown 8vo., pp. 427. Price, 7s. 6d. net.

DISEASES OF THE EYE AND THEIR TREATMENT, Twelfth Edition, Edited by Louis Werner, M.B., F.R.C.S.I.; 1919. London: H. K. Lewis & Co., Ltd.; Demy 8vo., pp. 671, with 273 illustrations in the text and 9 coloured plates. Price, 22s. 6d. net.

LA RACHIANESTHÉSIE GÉNÉRALE, par Le Professeur Thomas Jonnesco; 1919. Paris: Masson et Cie; Demy 8vo., pp. 127. Price, 4 fr. net.

DISEASES OF THE THROAT, NOSE AND EAR: FOR PRACTITIONERS AND STUDENTS, by W. G. Porter, M.B., B.Sc., F.R.C.S., Third Edition, fully revised under the Editorship of A. Logan Turner, M. D., F.R.C.S.; 1919. Bristol: John Wright & Sons, Ltd. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd.; Royal 8vo., pp. 300. Price, 12s. 6d.

MEDICAL AND D.P.H. EXAMINATION PAPERS, 1916-1919, for the Degrees of the University of Edinburgh and the Diplomas of the Royal College of Surgeons, Royal College of Physicians, Edinburgh, and Royal Faculty of Physicians and Surgeons, Glasgow. Edinburgh: E. & S. Livingstone; Demy 8vo., pp. 164. Price, 3s. net; by post 3s. 4d. net.

CATECHISM SERIES—ZOOLOGY: Invertebrate, Second Edition, revised and enlarged with plates, Part I., by Robert A. Staig; 1919. Edinburgh: E. & S. Livingstone; Crown 8vo., pp. 88. Price, 1s. 6d.

We have been informed that Mr. Richard Thomson, of Castlereagh Street, Sydney, is retiring from business as a medical agent. Mr. Thomson was for many years associated with the late L. H. Bruck in the firm of Bruck & Thomson Since his partner's death in 1915, the business has been carried on under the style, Richard Thomson. In the future the firm will be known as Richard Thomson & Co., and will be owned by Messrs. R. G. Garden and L. L. Hanrahan.

Medical Appointments.

Dr. Garnet Halloran has been appointed to the Honorary Medical Staff in connexion with ear, nose and throat work at the Newington State Hospital and Asylum, New South Wales.

It is announced that Dr. James Dawson (B.M.A.), Government Medical Officer at Mittagong, New South Wales, has been appointed an Inspector under Section 50 of the *Cattle Slaughtering and Diseased Animals and Meat Act, 1902.*

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxiii.

Federal Quarantine Service: Three Medical Officers.

Victorian Eye and Ear Hospital: Honorary Aural Surgeon.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges (other than the Grand United Order of Oddfellows and the Melbourne Tramways Mutual Benefit Society), Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital. Chillagoe Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30.-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Feb. 17.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Feb. 17.—Illawarra Suburbs Med. Assoc. (N.S.W.)
Feb. 24.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Feb. 25.—Vic. Branch, B.M.A., Council.
Feb. 26.—Q. Branch, B.M.A., Council.
Mar. 2.—N.S.W. Branch, B.M.A., Ethics Committee.
Mar. 3.—Vic. Branch, B.M.A..
Mar. 5.—Q. Branch, B.M.A.
Mar. 9.—Tas. Branch, B.M.A..
Mar. 9.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Mar. 11.—N.S.W. Branch, B.M.A., last day for nomination of candidates for election to the Council.
Mar. 11.—Vic. Branch, B.M.A., Council.
Mar. 11.—Q. Branch, B.M.A., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney. (Telephone: City 2645.)